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THE
ASIATIC SOCIETY OF BOMBAY
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ADMINISTRATION REPORT

OF THE

MUNICIPAL COMMISSIONER

FOR THE

CITY OF BOMBAY

FOR THE YEAR 1912-13.

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Review by the Standing Committee of the Administration Report of the Municipal Commissioner for the City of Bombay for the year 1912-13.

Corporation and Standing Committee.

The Honourable Mr. Munmohundass Ramji was President of the Corporation, and Mr. Chunilal Vijbhukandas Mehta, M.A., LL.B., Chairman of the Standing Committee for the year.

2. 53 Meetings were held by the Corporation and as many by the Standing Committee. There were besides 97 Meetings of Committees of the Corporation and 8 Meetings of Sub-Committees of the Standing Committee.

Commissioner.

3. Throughout the year Mr. P. R. Cadell, C.I.E., I.C.S., continued to hold the office of Municipal Commissioner for the City of Bombay.

FINANCIAL.

GENERAL.

4. The year's transactions resulted in a Surplus of Rs. 10,60,003, due principally to a rise in the annually growing revenue of the Municipality. Out of this Surplus, Rs. 3,10,053 were utilized for further reduction of the balance of Plague Expenditure. Opening with a working Cash Balance of Rs. 38,69,352, the year closed with a balance of Rs. 46,29,577. Excluding from this balance Rs. 10,17,956 reserved for lapsed grants required to be renewed in 1913-14, Rs. 9,25,000 ear-marked for payment to the City Improvement Trust on 1st May 1913, and Rs. 1,00,000, the minimum required to be reserved under the Municipal Act, the real unhypothecated Cash Balance at the close of the year amounted to Rs. 25,86,621 against Rs. 19,48,057 for the preceding year, showing an increase of Rs. 6,38,564. From this balance advances to the extent of Rs. 16,59,130 were sanctioned for New Works on Capital Account, which might otherwise have been hung up pending negotiations with Government for a new loan. There was also an enhancement of Rs. 23,83,015 in the balance in favour of the Assets as against the Liabilities which stood at Rs. 9,16,90,537 and Rs. 7,57,51,644 respectively. These results, together with a reserve of Rs. 12,41,800 and of Rs. 4,48,51,376, respectively, in the taxing and borrowing powers of the Corporation, assure the stability of the financial position of the Municipality.

Income.

5. The rates of Taxation continued to be the same as in the preceding year. Nevertheless, there was a rise of Rs. 6,04,700 in the Income for the year which totalled the record figure of Rs. 1,27,41,589 against Rs. 1,21,36,888 (exclusive of Rs. 4,88,901 on account of interest on Sinking and other Funds and Rs. 30,000 being the premia on the first instalment of 30 lakhs of the 55 Lakhs Loan) in the year previous. The original Budget Estimate of Rs. 1,20,00,500 was exceeded by Rs. 7,41,090, due, as in the

years past, to the expansion of the stable sources of revenue, the General Tax, the Halalkhore Tax and the Water Tax accounting for increases of Rs. 56,862, Rs. 35,832 and Rs. 1,19,949 respectively. There was a rise of Rs. 38,522 in the receipts from the Wheel Tax, which is accounted for by an increase in the number of victorias and labour carts plying for hire and the increase in the tax on motors. The extra realizations owing to " Returns from Property and Miscellaneous " amounted to Rs. 3,24,745. This was principally due to heavy receipts from an unexpected sale of Municipal land to the Port Trust in connection with the extension of the Harbour Branch Railway at Mazagon and to profits accruing from interest on Investments of Surplus Loan and other Balances. The Town Duties also brought in an increase of revenue to the extent of Rs. 1,32,131, due as in the preceding years to the ever-fluctuating receipts from sugar imports. Taking all the factors of expansion into consideration and eliminating all variable and unreliable sources of revenue, the Chief Accountant estimates the permanent expansion in the income of the Municipality at Rs. 3,51,000 as under, against Rs. 3,30,000 in the preceding year :—

	Rs.
Property taxes	2,76,000
Wheel tax	25,000
Licenses	9,000
Receipts from Tobacco Duty	4,000
Market receipts	30,000
Miscellaneous Fines	7,000
	3,51,000

6. *Incidence of Taxation.*—The following table for the last quinquennium shows a steady rise in the incidence of taxation :—

Year.	Rate of General Tax.	Incidence per head on population by census of 1911.		
		Rs.	a.	p.
1908-09	8⅜ per cent.	8	14	9
1909-10	9½ per cent.	9	13	2
1910-11	10⅝ per cent.	10	11	0
1911-12	Do. do.	10	13	2
1912-13	Do. do.	11	8	5

Expenditure.

7. Excluding Rs. 3,10,052 utilized towards writing off a portion of the unadjusted balance of Plague Expenditure advanced from Loan Funds, and also excluding the transactions relating to the investments of interest realized on Sinking and other Funds which were hitherto shown in the expenditure account although they did not really represent actual expenditure, the total expenditure for the year reached the record figure of Rs. 1,16,81,587, indicating an advance of Rs. 7,15,926 on the already very heavy outlay of Rs. 1,09,65,661 for the previous year. Some of the principal factors contributing to this enhancement were as under :—

	Rs.
Assessment and Collection Department...	65,301
Fire Brigade	1,45,319
Public Works Department	1,00,703
Public Health Department	1,56,722
Contribution to the C. I. Trust...	60,000
Debt	70,036
Grain Compensation	1,12,783

Making allowances for casual and non-recurring items, the Chief Accountant computes the permanent increase in expenditure at Rs. 2,33,000 as under, against Rs. 1,87,000 for the past year :—

	Rs.
Public Gardens	5,000
Public Works Department	69,000
Public Health Department	17,000
Pensions	10,000
Contribution to the C. I. Trust...	60,000
Debt	80,000
	2,41,000
Less—Decrease in Plague Expenditure	8,000
Total Rs. ...	2,33,000

Setting off this permanent increase in expenditure against the estimated expansion in revenue, the net permanent annual addition to the resources of the Municipality may be taken at Rs. 1,18,000 against Rs. 1,43,000 in the year previous.

8. *Lapsed Grants.*—In reviewing the financial transactions for several years past the Standing Committee have complained year after year that the Heads of Departments have not shown themselves sufficiently alive to the intimate relation between taxation and expenditure and they have repeatedly urged on them the vital necessity of framing their estimates in accordance with the actual requirements and of working up to the amount of such estimates. It was hoped that the cause of this oft-recurring complaint would gradually disappear, but the Committee regret to find that the evil of over-estimating is still growing as will be seen from the subjoined statement :—

Year.	Total Budget grants for the year.	Total unexpended grants required to be renewed.	Percentage.	Total unappropriated net savings.	Percentage.
1903-04	90,86,073	4,95,791	5·4	1,55,871	1·71
1904-05	93,26,241	5,74,910	6·1	1,60,113	1·72
1905-06	1,03,25,590	7,06,777	6·8	2,44,571	2·36
1906-07	1,04,32,893	6,66,084	6·3	2,46,019	2·36
1907-08	1,11,62,694	8,03,239	7·2	1,70,253	1·52
1908-09	1,15,21,022	7,12,338	6·2	1,78,558	1·55
1909-10	1,21,36,875	5,67,953	4·7	1,71,872	1·42
1910-11	1,21,74,691	6,61,178	5·4	2,31,642	1·90
1911-12	1,27,73,556	8,96,295	7·0	3,92,699	3·07
1912-13	1,31,00,589	10,17,956	7·7	4,01,046	3·06

There was an improvement after repeated complaints, but it will be seen that whilst that has not been maintained, the results of the last two years beat all past records. The Standing Committee trust that the Commissioner will now insist upon most careful attention being paid to this matter by the spending departments and take all possible steps to stop this perennial source of complaint.

9. *Plague Expenditure.*—The total outlay on plague measures from the outbreak of Plague to the close of the year under Review stood at Rs. 77,22,213, and the expenditure for the year amounted to Rs. 1,47,763 against Rs. 1,55,903 in the preceding year, showing a decrease of Rs. 8,140.

10. *Loan Works Expenditure.*—The total outlay on Loan Works during the year aggregated Rs. 17,87,920 against Rs. 19,70,181 in the preceding year, showing a decrease of Rs. 1,82,261. The original estimates for the year aggregated Rs. 47,70,562, and the actual expenditure was nearly 63 per cent. below the estimates. No doubt, Executive Officers have to face a good many difficulties in formulating and carrying to completion projects of great magnitude; nevertheless, it should be possible to frame more accurate and reliable estimates with due regard to the requirements of the Departments as well as their capacity to push forward the projected works. With a view to reducing the loan balances to a figure nearer the estimated requirements, the raising of the second instalment of 25 lakhs of the 55 Lakhs Loan was postponed for a year.

11. *Street Improvements.*—The total grants sanctioned for the acquisition of set-backs during the year amounted to Rs. 3,26,371 against which Rs. 3,25,623 were expended, leaving a balance of only Rs. 747 to be renewed in 1913-14. The undischarged commitments, however, up to 30th June 1913, in regard to set-backs already acquired and sanctioned to be acquired amount to Rs. 15,52,670, which with the addition of Rs. 6,10,365 paid from advances in 1910-11, 1911-12 and 1912-13, augment the uncovered liabilities to Rs. 21,63,035. In dealing with this subject the Chief Accountant observes :—

"Having regard to the great activity displayed in revising the regular lines of the streets in the City and the enormous increase in the value of land, it would seem necessary now to finance the growing cost of street improvements by increasing the Budget provision instead of raising loans from time to time. The consequent Interest and Sinking Fund charges entailed from year to year on these loans which are an unnecessary burden, would be obviated and the result achieved by an increased Budget grant would be the same while the latter would not increase the liabilities of the Municipality as a loan would."

The question as to what the future policy of the Corporation should be in respect of set-backs is now engaging the attention of a Committee of the Corporation, who will no doubt take the Chief Accountant's suggestion into their consideration; but the Standing Committee desire to record their dissent from the policy sought to be enunciated. Expenditure on street improvement is essentially an item of Loan Works. It generally takes years before streets are appreciably improved under the set-back system and the benefits of the improvement are enjoyed by the future generations. The Standing Committee therefore consider that having regard to the large contribution annually paid to the Bombay Improvement Trust, the question rather is whether the entire cost of street improvement should not be met from Capital. At any rate they are of opinion that Government should be moved to extend the period of currency of such loans to at least 60 years.

12. *Captial Debt.*—No loan was raised during the year, but Capital expenditure to the extent of Rs. 30,68,109 was incurred on New Works upto the close of the year and was met by advances to the extent of Rs. 12,60,838

out of Surplus Cash Balance and of Rs. 18,07,271 out of Surplus Loan Balances pending subsequent adjustment against loans proposed to be raised for the works. The amount paid during the year towards reduction of debt was Rs.1,18,830 which reduced the Capital Debt of the Corporation from Rs.5,91,60,746 in the preceding year to Rs. 5,90,41,916 in the year of report. Against this debt the total Sinking Fund Investments aggregated Rs. 1,26,39,883, leaving a net debt liability of Rs. 4,64,02,032 against Rs. 4,76,24,608 in the preceding year. It is satisfactory to note from the statement furnished by the Chief Accountant showing the book and market value of the paper held in the Sinking Fund at the close of the year that the market value of the paper is in advance of the face value by about 5 lakhs.

13. *Stores Audit.*—The Stores in stock on the last day of the year were valued at Rs. 4,50,267 against Rs. 4,60,542 in the preceding year. Of this, Rs. 26,868 represented the value of surplus and obsolete stores, showing a reduction of Rs. 8,554 on the balance in hand on the last day of the year previous. This balance would be still further reduced by Rs. 22,805 when the surplus and obsolete stores of the Drainage Department are disposed of by an auction sale as sanctioned by the Corporation under their Resolution No. 4784, dated the 18th November 1912.

14. *Test Audit.*—Test audit was continued during the year and 56 reports relative to the Health Department, Road Department and Drainage Department were made. The extra expenditure caused by the test audit operations was only 4,100 which amount, judging from the results achieved, was unquestionably well spent.

15. *Valuation of Municipal Properties.*—Whilst reviewing the Report for the year 1910-11 the Committee invited the attention of the Commissioner to Corporation Resolution No. 2609, dated the 28th May 1900, under which a complete inventory of all Municipal properties with details of original cost, present value, &c., should be embodied in the Administration Report once in five years, as no such inventory had been submitted since that date. It is reported that the revision of the valuation of the properties has been taken in hand since October 1912, and it may be hoped the work will soon be completed.

Assessment and Collection of Taxes.

16. With an increase of 1,615 in the number of properties on the Assessment Book from 59,721 to 61,336, there was a rise in the number of properties assessed for the General Tax from 50,424 in the year previous to 51,173 in the year of report. The number of properties exempted from the General Tax under Section 143 of the Municipal Act also increased from 1,987 to 2,175, and the properties exempted as being of insignificant value increased from 5,838 to 6,442. 1,546 Municipal properties were not assessed under the aforesaid Section against 1,472 in the previous year.

17. The year witnessed a further rise of over 14 lakhs in the rateable assessment of properties which amounted to Rs. 4,96,64,843 against Rs. 4,82,55,536 in the year previous. Opening with a gross assessment of Rs. 5,44,96,905, the year closed with an assessment of Rs. 5,51,71,773 against Rs. 5,36,02,464. The number of complaints against assessment fell from 5,737 in the preceding year to 3,799, and there were 3 appeals against 2 in the previous year. Of these, 2 were settled out of Court and withdrawn by the appellants and one was dismissed with cost.

18. Inclusive of demands in respect of previous years amounting to Rs. 13,301, the total demand on account of property taxes aggregated Rs. 85,23,174 against Rs. 82,49,940, showing an increase of Rs. 2,73,234, and the net income amounted to Rs. 85,00,318 against Rs. 82,06,082, showing an increase of Rs. 2,94,236. The outstanding balances on account of property taxes and wheel tax amounted only to Rs. 53,517 which compare very favourably with the average outstandings during the previous years. The drawback allowed during the year was Rs. 56,202 against Rs. 49,574 in the preceding year. In all 7,244 claims for drawback were received, of which only 3,565 were admitted. The question of revising the law and rules in force regarding refunds and drawbacks is still under the consideration of a Committee of the Corporation.

19. A decrease of Rs. 24,457 is recorded in the actual receipts from the General Tax, the realizations for the year being Rs. 49,51,862 against Rs. 49,76,319 in the previous year. This decrease is accounted for by the fact that the previous year's receipts included a sum of Rs. 1,58,773 on account of arrears of General Tax on the quinquennial revision of Government properties. If that item is eliminated, the year's receipts reveal an increase of Rs. 1,34,316. The Water Charges amounted to Rs. 21,70,949 against Rs. 20,79,119, and the proceeds from the Halalkhore Tax, inclusive of charges for special service, increased from Rs. 12,92,697 in the preceding year to Rs. 13,50,832.

20. The receipts from the Wheel Tax amounted to Rs. 5,23,522 (exclusive of Rs. 21,783 derived from the right of collecting tolls at the Mahim and Sion Causeways) against Rs. 4,69,486. During the year were taxed 3,923 four-wheeled vehicles against 3,955, 947 two-wheeled vehicles against 908, 704 motor cars against 624, and 94 motor cycles against 63 in the preceding year.

21. The right of collecting tolls at the Mahim and Sion Causeways fetched Rs. 21,783 against Rs. 21,100 in the preceding year. From the statements furnished by the toll farmer, it appears that the toll was levied in respect of 1,83,070 vehicles and that the amount realized was Rs. 22,883, leaving a margin of Rs. 1,100 to cover the expenses of collection and interest charges. Apparently some explanation is needed as to the considerations weighing with the toll farmers in undertaking annually the expense and labour of collecting these dues for such a very poor margin of profits.

22. The rates of Town Duties continued the same as in the previous year. Nevertheless, the net revenue shows an unprecedented increase of Rs. 3,78,687 from Rs. 13,53,206 in the previous year to Rs. 17,31,893 in the year of Report. This was due principally to abnormal imports of sugar towards the end of the year which would entail heavy refunds during the current year and the Revenue and Refund Audit Officer estimates that the net revenue for the year 1913-14 would show a reduction of about Rs. 3,00,000. The total collections for the year aggregated Rs. 38,47,929 against Rs. 31,48,247, and the refunds allowed in respect of goods exported amounted to Rs. 21,16,035 against Rs. 17,95,040.

23. After considerable delay, the scheme for stamping departmentally Municipal marks upon all packages of sugar imported into the city, approved by the Corporation more than five years ago on the recommendation of the Executive, was sought to be launched in the year under Review. "But," says the Revenue and Refund Audit Officer, "so strong was the opposition of trade, which rather preferred to pay a transit or non-refundable duty of two annas per cwt. (equal to from 3 to 4 annas per bag) than incur the expense of only about a pie per bag in the special handling of the bags for purposes of Municipal stamping, that it was

thought advisable to suspend the introduction of the scheme as a compulsory measure and to leave it to the option of merchants to avail themselves of it whenever they themselves chose to do so." The Standing Committee regret that a long-deferred scheme which gave such promise of securing better identification of goods than by means of merchants' marks and thereby facilitating the disposal of claims for refund and preventing the perpetration of frauds that have heretofore characterized the work of the Chithiwallas in this respect, should have to be thus further kept in abeyance owing to the opposition of the traders. No report on the subject has been so far placed before the Corporation. The Committee trust that the Commissioner will devote his best attention to the subject and arrange to carry out the scheme, or bring up the question for the early consideration of the Corporation in the light of the difficulties experienced or anticipated in the working of the scheme.

Public Works.

24. *General Branch.*—The new works carried out by the Executive Engineer's Department comprised acquisition of properties, construction of roads, diversion of sewers, storm-water drains and water-mains in connection with the construction of overbridges at Elphinstone Road, Currey Road, Clerk Road and DeLisle Road, construction of stables and chawls for Biggaries at Jail Road and Arthur Road and of a primary school building at the junction of Morland Road and Sankli Street. Out of 64 sanctioned new works, as many as 37 were not commenced at all and 27 were in progress at the close of the year. Whilst recognizing the zeal with which some of these works have been proceeded with, and making due allowance for the difficulties hampering big departments in carrying out works of various descriptions, the Standing Committee cannot help thinking that some system might be evolved whereby the delay that takes place at present in taking in hand works sanctioned by the Corporation could be avoided.

25. *Drainage.*—The Engines and Pumps at the Love Grove Pumping Station worked fairly well during the year. These are however no longer equal to the increasing amount of work thrown upon them, and the Committee learn with satisfaction that the work of erecting the new engines with the necessary buildings is nearing completion. The Screening and Dredging Chamber was completed and fitted up with the required machinery and electric plant during the year. The Engine House was completed and much of the machinery installed, while considerable progress was made with the Boiler House. The whole work is expected to be in full working order in the year 1913-14. The machinery at the Colaba and Love Grove Air Compressor Stations and the several Ejector Stations worked satisfactorily throughout the year, barring a few insignificant difficulties at certain points.

26. Much delay has been caused in undertaking the work of the New Low Level Sea Outfall owing to the necessity for taking fresh soundings for the direct line of pipes for the outfall recommended by experts in place of the existing deflected one. The Standing Committee have no doubt that the work will now be vigorously pushed forward. Besides this, the undermentioned important works call for vigorous action :—

(1) Diversion of the S. W. Channel from Love Grove to Worli and provision of Pumps to serve all the S. W. Channels at Worli, (2) Sewerage of the North of the Island, and (3) Enlargement of and addition to old sewers in view of the increased water-supply.

27. Satisfactory progress was made with the scheme for draining the High Lands from Byculla north to Dadar into the Harbour. The sections from Byculla bridge down the Connaught and Reay Roads were in working order, and good progress has been made with the section from Sopari Baug Road, and along Reay Road. The sewerage of

the Elphinstone Reclamation District was taken in hand during the year. The Commissioner brings to notice the necessity for substituting stronger and more mosquito-proof covers for water entrances throughout the town and the necessity for erecting additional public latrines and urinals throughout the city. Definite proposals concerning these matters will be awaited.

28. During the year 208 street connections were made, against 295 during the preceding twelve months, at a cost of Rs. 10,625. In addition to these, 65 stormwater connections were made, at a cost of Rs. 2,078, against 96 in the preceding year. Action to get properties in the Malabar Hill District connected with the new sewers was continued. Out of 15 notices served, 13 were complied with and in 2 cases the works were in progress. 51 common house gullies were remodelled at the cost of owners amounting to Rs. 87,718.

29. *Streets and Buildings.*—3,618 building applications were received during the year against 3,404. 522 notices were issued for removal of unsafe buildings against 274 in the preceding year. Of these, 427 were complied with. In 44 cases the structures were removed by the Municipality and 51 cases were pending at the close of the year. 21 buildings or parts of buildings fell during the year against 11 in the year preceding. In 18 cases no injury was done and in the remaining 3 cases 10 persons were killed and 7 injured. Action was taken for the removal of 516 inflammable and insanitary huts, of which 426 were removed and 90 cases were pending at the close of the year.

30. The prosecutions inclusive of those withdrawn, *viz.*, 668, numbered 1,314 against 1,608. In 159 cases the parties were warned and discharged, while 314 persons were convicted and fined, and 173 cases were pending at the close of the year. The amounts of fines aggregated Rs. 5,009, giving an average of Rs. 16 per head. The question of an enquiry as to the Municipal cases dealt with by the Presidency Magistrates and of appointing a Municipal Magistrate is still under the consideration of a Committee of the Corporation.

31. Ground measuring 25,829·4 square yards was added to the streets in the year of report against 8,838 square yards. This is about treble the area that was added last year, and is much larger than in any previous year, but the cost estimated is not so great, being Rs. 3,95,102 against Rs. 3,03,859, the estimated value of the land acquired during the previous year. This is accounted for by the fact that nearly half of the area acquired was G Ward land which is valued at Rs. 69,773 only. The difficult question as to what the future policy of the Corporation should be in respect of street improvements is still engaging the attention of the Committee appointed by the Corporation to consider the subject.

32. The area of roads metalled during the year was 5,017,009 square feet against 5,679,294 square feet, and the total amount spent on repairs and maintenance was Rs. 4,88,017 against Rs. 4,69,897, the rates for full metalling and full patching working out at 10·56 pies and 7·07 pies per square foot, respectively, against 8·53 pies and 6·77 pies in the preceding year. This increase is due to a rise in the wages of workmen by 16 per cent. and to the provision of rubble stone bottoming and thickening the coat of metal on the main thoroughfares so as to withstand the wear and tear due to heavy motor vehicles. Out of 165 miles of road, 33½ miles were disturbed in connection with pipes, cables, &c. The operations of the Tramways Co., the Gas Co., the Telephone Co., and the Tata Hydro-Electric Co. were responsible for about 21 miles. Roads measuring 1,775,566 square feet were treated with tar at a cost of Rs. 59,345.

33. Portions of Victoria Road, Mayo Road, Arthur Road and the private road leading from Arthur Road to Mahaluxmi Cutchra Siding, and Worli Road from its junction with Fergusson Road northwards were widened during the

year. Several private streets were under action for improvement. The Committee note with satisfaction that considerable progress was made in providing new footpaths, and that roadside tree-planting also received attention.

34. *Tramways.*—No extension of tramways was carried out during the year, but about 120 feet of rails were renewed, and an additional siding laid on Foras Road leading to the Company's stables.

35. *Overbridges.*—Very satisfactory progress was made with the construction of overbridges. The overbridges at Elphinstone Road, Currey Road and Clerk Road are expected to be completed by the end of 1913-14, but the one at DeLisle Road would be delayed as the revised proposals for widening the bridge to 80 feet are still under consideration. A satisfactory settlement has been arrived at in regard to the Dadar Road Overbridge between the Railways and the Municipality and it may be hoped that the work will now be taken in hand.

36. *Survey of Bombay.*—Government Surveyors were engaged during the year on the topographical survey of the Island and were given the necessary assistance.

37. *Lighting.*—For the lighting of the City 5,508 gas lamps and 1,778 Kerosene Oil lamps were maintained during the year at a cost of Rs. 3,59,899 and Rs. 33,934, respectively. These figures reveal an increase of 171 in the number of gas lamps and a decrease of 55 in the number of Kerosene oil lamps and a net increase of Rs. 22,363 in the total expenditure.

38. *Workshops.*—The value of departmental and private work turned out at the Municipal Workshops has been computed at Rs. 1,93,218 against Rs. 1,85,304 during the preceding year, the net result of the year's transactions being a balance of Rs. 2,333 against Rs. 2,122 in favour of the Workshops. Good progress was made with the work of constructing the New Workshops at Foras Road. The four motor cars provided for the Engineering and Health Departments covered 24,910 miles at a running cost of 5·32 annas per mile as compared with 5·07 annas in 1911-12. It is gratifying to learn that these cars have greatly increased the amount of supervision and inspection exercised by the Heads of Departments.

39. *Water Works.*—During the year the Water Works were maintained in a state of efficiency. The water proofing works at the Malabar Hill Reservoir were continued with satisfactory results, the four original filter-beds were thoroughly repaired and brought into use, the work of water-proofing one of the two reservoirs was completed, and satisfactory progress was made with the other reservoir. The question of increasing and improving the water supply of the city by duplicating the Tansa Main reached its final stage during the year of report. After obtaining expert advice the Corporation have sanctioned the necessary works. The works of raising the Tansa Dam, widening earthwork embankments along the Tansa Syphons, and duplicating the Tansa pipe line were taken in hand, and the Committee trust they will be carried to completion as expeditiously as possible. The Department had to face serious difficulties owing to deficient rainfall and the depletion of the Vehar Lake. The supply had to be curtailed causing some inconvenience, but the work of distribution received the most careful attention of the Department and public demands, such as those of the Fire Brigade, were fully met.

40. The rainfall recorded for the year at the Colaba Government Observatory was 54·05 inches and was much below the average of 71·15 inches. At Tansa Lake it was 88·12 inches against 69·23 in 1911, and was 3 per cent. below the average; at Vehar it was 69·55 inches against 60·27 in

1911 and was 16·6 per cent. below the average; at Tulsi it was 77·25 inches against 70·35 inches in 1911 and was 24 per cent. below the average. The Tansa Lake overflowed on the 21st July; the Tulsi and Vehar Lakes did not overflow.

41. With 640 water connections newly made and 267 cut off for various reasons, the total number of connections stood at 23,954 against 23,314 at the close of the preceding year. Of these, 3,227 were metered against 3,134 in the year 1911-12.

42. 918 underground and 28,162 aboveground leaks and defects were detected and remedied by the Waste Prevention Branch of the Water Works Department. The total length of mains examined, excluding second and subsequent tests, was 35,965 feet against 50,226 feet in the previous year, and the length including second and subsequent tests was 2,486,482 feet against 1,833,428. The work of renewing, enlarging and extending the water mains was continued during the year and 8·07 miles of new pipes were laid.

Fire Brigade.

43. Throughout the year the Fire Brigade was efficiently maintained. The plant was increased by two petrol motor engines and one steam motor engine, in consequence of which 2 Steam Fire Engines and 4 Horses were disposed of. The new Fire Station at Elphinstone Bridge Road was completed and occupied during the year. The question of providing new up-to-date stations for the Fort and Naigam Districts and of rebuilding the Gowalia Tank Station was still under consideration. Sanction to institute a Fire alarm system was given during the year and a system put forward by the Bombay Telephone Company was approved. The working of this system will be watched with interest. Notwithstanding the shortage of water supply, a prompt and sufficient supply was always available at fires. Sea water was also used by the Brigade on several occasions.

44. There were 174 calls of which 12 were false alarms. The actual number of fires showed an increase of 38 compared with that for the previous year and an increase of 60 over the average of the preceding 10 years. Despite the increase in the number of fires, the total damage to property is estimated at Rs. 15,20,093, showing a decrease of Rs. 7,84,610 as compared with the amount for the preceding year. This is accounted for by the fact that no very great fire occurred during the year, the highest amount of damage in a single case having been computed at Rs. 3,50,000 against 20 lakhs of the Colaba Fire in the previous year. Of the amount of damage, Rs. 14,51,718 represented insured, and Rs. 68,375 uninsured, property. The buildings damaged by fire numbered 45, of which 26 were insured and 19 uninsured. The Brigade was also requisitioned in connection with 10 cases of fallen houses. 10 persons lost their lives and 7 received slight injuries, the collapse at Lal Bagh being responsible for 8 deaths and 5 persons injured.

Public Gardens.

45. The year witnessed a decline in the number of visitors at the Victoria Gardens which was 1,496,569 against 1,618,810 in the year previous. One of the reasons given for the decrease of about 122,000 is that the days on which an admission fee is charged were changed from Wednesdays in the previous year to Saturdays in the year of Report. The other reason advanced is that the large number of visitors to the city during the Royal Visit in the previous year augmented the number of visitors for that year. This, however, is not borne out by the statistics for that year and for the year preceding it. The subjoined statement for the past quinquennium shows that there is a

marked downward trend in the number of visitors which calls for some explanation, especially in view of what is recently being done to popularize the Gardens :—

Year.	No. of Visitors.
1908–09	2,060,343
1909–10	1,951,917
1910–11	1,618,724
1911–12	1,618,810
1912–13	1,496,569

As usual band performances were given at the Victoria Gardens, Esplanade Bandstand and Chowpatty, and continued to be popular. The Elephant and Camel rides were also well availed of.

16. No noteworthy additions to the Zoo have been reported, whereas the mortality was considerable, largely owing to an outbreak of rinderpest. At the request of the Superintendent of Gardens, Major W. G. Liston, I.M.S., Director, Bombay Bacteriological Laboratory, was good enough to prepare a prophylactic vaccine for preventing fowl cholera among the birds of the Gardens. Many birds were inoculated with this serum and this measure is reported to have checked the spread of the disease to a great extent.

47. *Victoria and Albert Museum.*—The Museum was open to the public during 313 days of the year. The total number of visitors was 822,577 against 824,590 during 1911-12, giving a daily average of 2,628 against 2,635. In the Department of Natural History Collection satisfactory progress was made in identifying the collection of shells. In the Archæological Section five photographs of the caves at Elephanta and a photograph of the cave at Nasik were added to the collection of Bromide Prints of Rock cut caves of Western India. An interesting collection of Industrial Figures showing the different stages in some of the industries of this Presidency was also made. The Curator is gradually making a collection of books, prints and maps connected with Bombay, which will form an " Old Bombay " room in the Museum. The thanks of the Corporation are once again due to Mr. F. H. S. Stone, Chief Officer of the S. S. " Arcadia," who has not only presented many specimens but has also rendered valuable assistance in arranging the collections.

Health Department.

48. The general climatic and health conditions of the City during the year were exceptionally unfavourable. The total death-rate was 39·77, the highest recorded since the year 1907. This is attributed mainly to the epidemic incidence of small-pox and cholera in addition to the prevalence of plague but the statistics furnished by the Health Officer reveal a rise under all principal heads except Measles. The Health Officer has drawn an interesting comparison between the climatic and health conditions prevalent in the year of Report and those prevalent in the year 1906. " Both years, " he points out, " were characterized by the prevalence of abnormal climatic conditions very prejudicial to health all over India. Both were years of very deficient rainfall and succeeded one (two in case of 1906) whose record of rain was very much more meagre. The result in either case was unusually high temperature during Summer and Autumn and unusual rise in the incidence of diseases peculiar to those seasons. The general death-rate recorded was 39·77 in 1912 (against 35·69 in 1911), next to that of 1906 (54·07), but higher than in any intermediate year. "

49. 21,518 births were registered during the calendar year 1912 against 21,376 in the preceding year, giving a birth-rate of 21·96, the highest recorded since the year 1906. The number of births registered does not however represent the whole of the infant population of Bombay, as a considerable number of children of mothers belonging to the City but born outside it and

brought into the City after birth is not registered. During the year under Review 6,577 such children were vaccinated. Taking these into account as well as the percentage of the unregistered children who must have escaped vaccination owing to death or delays, the probable infant population of the City works out at 29,920, giving a birth-rate of 30·44 per mille against 28·69 for the twelve months preceding, and against 38·58, the birth-rate for the whole of India. Among the different communities residing in the City, only the Jews and Hindus exhibit an improvement in the birth-rate, all the other communities registering a decline as will be seen from the following figures:—

Communities.	Birth-rate for 1911.	Birth-rate for 1912.
Jews	31·68	34·10
Hindus	20·39	21·13
Parsees	29·19	26·56
Native Christians	25·70	24·05
Mussalmans	24·03	23·17
Eurasians	22·20	20·29
Europeans	19·42	19·00
Buddhists	13·84	1·73

50. After a series of years of steady improvement there was a heavy rise in the general mortality of the City. In all 38,954 deaths were registered against 34,961 in the previous year, giving a death-rate of 39·77 against 35·69. This set-back would have been a matter for great concern were it not apparent that it was but a temporary check on the gradual improvement of the health conditions of the City as evidenced by the mortality returns for the nine months of the current year which show that the City has fully recovered from the set-back. Of the 38,954 deaths, 9,688 were contributed by the diseases of the Respiratory System. Diarrhœal Diseases claimed 4,544 victims, Cholera 1,790, and Small-pox 979. The only relieving features in the year's record were the unprecedentedly low mortality from Plague and the considerably low mortality from Measles. 1,717 deaths from Plague were registered against 4,006, and 210 from Measles against 652 in the year previous.

51. Once again the prevalence of Cholera and Small-pox was synchronous with the outbreak of those diseases in outside districts. In the commencement, owing to prompt precautionary measures, cholera was kept well under control, but in the middle of June it suddenly attained fearful proportions and the severity of the outbreak was most marked in the Mahomedan quarters of Mandvi and Umerkhadi. During the first ten days of June a daily average of 3 attacks and 3 deaths was recorded. On the 11th, immediately after the procession of the Pir Saheb of Baghdad through those quarters, when there was a large concourse of people in the streets and a large consumption of food and drink sold in the streets, the disease took a sudden leap forward and increased in virulence till the 15th, 503 attacks and 414 deaths having been registered during the five days. Vigorous measures were taken to arrest the spread of the disease, a meeting of the leading Mahomedans was convened at the Municipal Offices so as to enlist their co-operation in combating the disease, and after the 15th June there was a marked and steady decline. The Health Officer has given a full account of the history of this epidemic and the measures taken by the department; he has also thrown a good deal

of light on the subject by giving a historical survey of the prevalence of the disease in Bombay since the year 1850, and by his observations on the etiology and bacteriology of the disease. The history of Cholera in the City, like that of Small-pox, being "a history of continual importations from outside," Government have been repeatedly moved in the matter and they have been pleased to issue instructions for stopping infected persons from carrying the disease from place to place. But the Standing Committee have noticed that even the most vigilant measures for the examination of outgoing passengers and the detention of the infected and the inspection and observation of immigrants fail to keep back infection from the City, and it was urged in the Committee's Review of the Report for the year 1909-10 that the necessity for taking, in the first instance, all possible sanitary measures to prevent the outbreak of the disease at the very centres of infection should be represented to Government. Since then a good deal of time has elapsed. The Committee, however, note with satisfaction that the Government of India have now started an "inquiry into the possibility of improving sanitary arrangements at centres where Hindu and Mahomedan pilgrims congregate for worship or for starting their journeys to holy places." The result of this inquiry will be awaited with keen interest.

52. Small-pox was prevalent throughout the year and epidemic for over three months from the end of February to the end of May. As usual, the virulence of the disease increased with importation from outside, and the Hajis are again reported to have been mainly responsible for the epidemic. Usual facilities were provided for the vaccination of these pilgrims; and out of the 15,464 pilgrims who left Bombay for the Haj between May and October, 10,587 (8,590 males and 1,997 females) were vaccinated in Bombay before embarkation. Facilities were also afforded to the public for vaccination and revaccination, and 38,640 persons were vaccinated. Of these, 20,946 were primarily vaccinated and 17,094 revaccinated.

53. The mortality from fevers, including Malaria was 3,585, showing an increase of 439 over the preceding year. Of these, 360 deaths were due to Malaria, showing, despite special operations, an excess of 26 over the previous year. The incidence of the disease was in special evidence in the Esplanade, Fort North and South, Upper Colaba, and Dongri. In accordance with the recommendations made by Dr. C. A. Bentley, the Officer appointed by Government to investigate into the causes and suggest measures for the control and prevention of Malaria in Bombay, a special Malaria Department was organized during the year. Vigorous action was taken to deal with infected and insanitary wells in as conciliatory a manner as possible. A spleen census was taken, and efforts were made to educate the public in the cause and prevalence of Malaria by lectures and demonstrations.

54. The Europeans as usual returned the lowest death-rate, 21·43 against 20·68 in 1911. The death-rate amongst the Parsees was the next lowest, being 25·79 against 24·38. Amongst the Hindus the mortality was 38·43, amongst the Native Christians 38·37 and amongst the Jews 38·50. As in the previous years, the Mahomedans recorded the highest death-rate of 50·72 against 46·39 in the preceding year.

55. With the rise in the City's bill of mortality the infantile death-roll was also higher. Against 8,120 in the preceding year, 9,646 deaths of children under one year of age were registered in the year of report, the death-rate per mille, calculated on the corrected number of births worked out by the Health Officer, being 322·3 against 283·8 in 1911. The Municipal Nurses and Midwives, together with the Lady Health Visitors of the Bombay Sanitary Association, are doing their best to educate the backward classes in the upbringing of their children. This is however not sufficient, and the Health Officer observes that while the adoption of the practical remedies undertaken

in other Cities seems far distant, he would suggest " the advisability of a Committee being appointed to consider and advise on the best means to be adopted to improve the condition of the women during labour and their infants during infant life." The Standing Committee have no doubt that the Corporation will cordially take up this suggestion, and if a Committee is appointed, the following questions to which attention has been drawn in the past, might also be referred to it :—

(1) Provision of Lying-in-Hospitals for the poor and free medical attendance, and provision of a nurse before and after child-birth. (2) Education of the native midwives at the hospital, and registration and licensing of these women. (3) Introduction of a section in the Act so as to prevent a woman without a certificate and license to attend on a confinement. (4) Provision of milk depôts where women could obtain pure milk at a small cost.

56. 949 confinements were attended by the Municipal Nurses against 746 in 1911, and their house to house visits numbered 38,643 against 37,875. The nurses also continued their enquiry into the conditions of newly-born infants and useful data have been gathered concerning child-life in Bombay.

57. The number of persons who availed themselves of the free medical aid given by the twelve Municipal Dispensaries, including two new dispensaries added during the year, one at Purbhadevi, and the other "Bai Gowrabai Dispensary" at Kamatipura, was 80,106 against 81,225 in 1911. Of these, 2,018 patients were seen at their houses. The number of persons treated at the Aided Charitable Dispensaries at Colaba and Victoria Bunder was 8,484, of whom 120 were seen at their houses. 1,687 Notifications of Infectious Diseases were received during the year from Medical Practitioners against 1,551 during the preceding twelve months. From Hakims and Vaidyas 31 Notifications were received and the diseases reported in 30 cases were found on investigation to be correct.

58. The work done in the Municipal Laboratory is steadily increasing. 5,675 articles were examined during the year against 5,198 in the year previous. Of these, 1,630 were examined chemically and 4,045 bacteriologically. 92 jars of rat-poison, each having a capacity of 28 lbs., were prepared during the year. 417 jars of mercurial solution were prepared in the Laboratory, and 1,674 capillary tubes of Glycerinated Vaccine were examined as to their sterility before being used for the Vaccination Department. The Committee note with satisfaction the research work started by the Municipal Analyst.

59. At the Arthur Road Hospital there were 1,540 admissions against 965 in the previous year. Of these, 658 were cases of small-pox, 475 of cholera, 53 of chicken-pox, and 51 of measles. 490 cases proved fatal. Of the 658 small-pox cases, 426 were vaccinated and 232 unvaccinated, and the incidence of mortality amongst these two sets of cases was 16·9 and 40·51 respectively, proving unquestionably the efficacy of vaccination in reducing the case mortality rate amongst those protected by it. The admissions to the Maratha Hospital numbered 311 against 604 in 1911. Of these, 238 were plague cases, the mortality rate amongst them being 73·10 per cent. The Plague Research Commission having concluded their observations on the Serum Treatment of Human Plague, the Advisory Committee in London have published the result of their inquiry and their finding is that "from the whole inquiry it appears that the administration of the available sera is not a practicable means of bringing about any material diminution in the mortality from plague in India. It may well be that better results would be obtained if the treatment could be commenced within a few hours of the onset of the disease ; this, however, is in the great majority of cases, impossible in ordinary hospital practice." The Standing Committee are glad to note the tribute paid by the Advisory Committee to Khan Bahadur Dr. N. H. Choksy, Special Assistant to the Health Officer, "without whose cordial encouragement and assistance this inquiry would have been hardly possible."

60. Thanks to the exertions of the Health Officer, Dr. Turner, the year under review witnessed the formation of the King George V. Anti-Tuberculosis League. This League, though not a Municipal concern, has the cordial support of the Corporation, who have contributed Rs. 10,000 per annum towards its operations for three years, and it has the direct co-operation of the Health Department of the Municipality, the Executive Health Officer and his Special Assistant in charge of the Infectious Diseases Hospital being the Honorary Secretaries of the Bombay Branch. The League has before it a wide sphere of public usefulness and beneficence and its operations will be watched with great interest.

61. During the year 717,806 cart-loads of rubbish were emptied at the Tardeo Flats and other places against 721,752 in the preceding year, and 114,129 nightsoil and cesspool carts and 4,363,785 nightsoil baskets were emptied at the several nightsoil depôts as compared with 114,377 nightsoil and cesspool carts and 4,314,968 nightsoil baskets in the foregoing year. Sanction has been accorded to the installation of an Incinerator of the most modern type on the site of the Municipal Milch Cattle Stable on Bapty Road for the destruction of refuse, and the question of erecting another Incinerator near Carnac Bridge or on the Paltan Road site is deferred pending the results of the working of this Incinerator.

Licenses.

62. With an increase in the number of licenses from 8,119 in the previous year to 8,336 in the year of review, the receipts grew from Rs. 1,00,486 to 1,09,896, the largest recorded since the creation of the Department in 1890. The Licensed Department is primarily intended for controlling the operations of trade and industry, and the license fees are levied to cover the expenditure. The Commissioner was, therefore, asked by the Corporation under their Resolution No. 6464, dated the 6th February 1913, to report whether the scale of license fees in respect of certain articles could be reduced " with due regard to the expenditure necessary for controlling dangerous and offensive trades and operations." Agreeably to this proposal the Commissioner submitted proposals for reducing the license fees, and the Corporation having approved of the reductions the revised scale of fees will take effect from 1st April 1914.

63. Bakeries and Aerated Water Factories were licensed for the first time, the number of those licensed being 54 and 34 respectively. The revised Bye-laws in respect of Milch Cattle Stables were still under consideration and the proposal to amend the Municipal Act so as to authorize the Corporation to make Bye-laws for regulating Horse and Bullock Stables was pending before Government. The total number of prosecutions instituted during the year was 3,564 against 3,127 in the preceding year. In 794 cases, against 681 of the year previous, fines were inflicted and amounted to Rs. 13,624, the largest figure ever recorded.

Markets.

64. The total receipts from Markets and Slaughter Houses amounted to Rs. 5,81,035 against Rs. 5,45,836, showing an advance of Rs. 35,198 on the previous year. The increase was principally due to a revision of stall rents in the Crawford and Erskine Road Markets and to a rise in slaughter fees due to a considerably large number of horned cattle brought to Bandora for slaughter on account of famine in upcountry districts.

65. The quantity of unwholesome food destroyed by the Department during the year was almost double that of the last year, being 254,757 lbs. against 134,441 lbs., the quantity of fish destroyed alone being 207,021 lbs. The quantity of contraband meat seized and destroyed was 6,726 lbs. against 28,696 lbs. in the previous year and 94,557 lbs. in 1910–11. This great reduction is due to continued supervision and the power

given under the amended section 412 of the Municipal Act to the Police and Railway servants of seizing and destroying such flesh.

66. A private milk market at Ali Umer Street was licensed for the first time during the year. This marks a beginning in bringing the sale of this important article of human consumption under the supervision it essentially needs.

Primary Education.

67. The year under review witnessed the opening of 18 new schools, 8 Marathi, 5 Gujarati and 5 Urdu. Three of these were opened specially for the education of factory children, who are charged no fee and are supplied with slates, pens and exercise books. The Standing Committee trust that full advantage of these facilities will be taken by those concerned.

68. The number of Municipal Schools and of Pupils attending them shows an increase from 142 schools with 15,861 pupils to 160 schools with 16,746 pupils. The number of aided schools and of pupils attending them also rose from 126 schools with 13,621 pupils to 134 schools with 14,021 pupils. The grant-in-aid given to these schools consequently increased from Rs. 40,647 in the preceding year to Rs. 45,167. The Schools Committee's receipts for the year aggregated Rs. 3,68,837 against Rs. 3,65,197, and the expenditure was Rs. 3,78,088 against Rs. 3,38,264, the increase being accounted for by the opening of new schools, the employment of additional teachers and the provision of better quarters for some schools. Five schools were accommodated in special buildings constructed out of the combined Municipal and Government grants, and negotiations are in progress for the acquisition of sites for additional buildings.

69. The proportion of trained teachers to untrained teachers was 173 to 133 in Marathi schools. In the Gujarati schools however it was 46 to 123 and in Urdu schools 16 to 166. As Government have now provided increased facilities for the instruction of students from Bombay in the Training Colleges in Poona and Ahmedabad, it may be hoped that efforts will be made to increase the proportion of trained teachers, especially in the Gujarati and Urdu schools.

Conclusion.

70. In conclusion the Standing Committee record their high appreciation of the able and successful administration of Municipal affairs during the year by Mr. P. R. Cadell, C.I.E., I.C.S., as Municipal Commissioner for the City of Bombay.

MUNICIPAL CORPORATION OFFICE,
Bombay, 8th October 1913.

FAZULBHOY M. CHINOY,
Chairman of the Standing Committee.

Annual Administration Report of the Municipal Commissioner for the City of Bombay for the year 1912-1913.

Introductory.

1. Mr. P. R. Cadell, C.I.E., I.C.S., continued to hold the office of the Municipal Commissioner for the City of Bombay throughout the year.

2. The general health of the City was on the whole satisfactory during the year.

I.—Corporation and Standing Committee.

THE CORPORATION.

3. The Hon'ble Mr. Munmohundass Ramji was appointed President of the Corporation at the meeting held on the 11th April 1912, and held that appointment throughout the year.

4. Fifty-three meetings of the Corporation and ninety-seven Meetings of the Committees of the Corporation, other than those of the Standing Committee, were held.

5. The changes that took place during the year in the personnel of the Corporation were as follows :—

Mr. G. O. W. Dunn resigned on the 11th April 1912 and in his place Mr. Jehangir Dosabhai Framji, I.S.O., was appointed by Government on the 1st May 1912.

Mr. D. F. Leao resigned on the 9th July 1912 and in his place Mr. M. M. S. Gubbay, I.C.S., was appointed by Government on the 24th July 1912.

Mr. Sorabji Cursetji Dhondy resigned on the 11th March 1913.

Mr. Balkrishna Wassoodev Pandoorung resigned in March 1913.

6. The following Councillors were absent from the Meetings of the Corporation for the period shown below for reasons approved by the Corporation under Section 17(*b*) of the Municipal Act :—

Name.	Period.
Mr. J. P. Orr, C.S.I., I.C.S.	From 2nd July to 22nd October 1912.
Mr. Phiroze C. Sethna	From 22nd April to 5th December 1912.
Mr. F. H. Simkin	From 15th August to 31st December 1912.
Dr. Temulji Bhikaji Nariman, L. M., F.R.M.S. (London).	From 14th October 1912 to 3rd February 1913.
Mr. A. M. Tod	From 20th April to 15th November 1912.

THE STANDING COMMITTEE.

7. Mr. Chunilal Vijbhukandas Mehta, M.A., LL.B., was appointed Chairman of the Standing Committee at the Meeting held on the 3rd April 1912, and held that appointment throughout the year.

8. There were fifty-three regular Meetings of the Standing Committee and eight Meetings of the Sub-Committees thereof.

9. There were fifty-two attendances of members for the Audit of Municipal Accounts and seventy-two for cheque signing.

10. The changes that took place during the year in the personnel of the Standing Committee were as follows :—

*Mr. A. M. Tod resigned on the 3rd April 1912 and in his place the Hon'ble Mr. J. A. D. McBain was elected by the Corporation on the 2nd May 1912.

Mr. Phiroze C. Sethna resigned on the 18th April 1912 and in his place Mr. Balkrishna Wassoodev Pandoorung was appointed by Government on the 6th May 1912.

Mr. Balkrishna Wassoodev Pandoorung resigned in December 1912 and in his place Mr. Phiroze C. Sethna was re-appointed by Government on the 27th December 1912.

11. The following is the list of Municipal Councillors who held Office on the 31st March 1913 :—

MUNMOHANDASS RAMJI, THE HON'BLE MR., J.P., *R* (C Ward), *President*.

ABDUL HUSSEIN ADAMJI PEERBHOY, THE HON'BLE MR., J.P., *R* (C Ward.)
ABDUL SATAR AYUB GAYA, DR., L.M. & S., *R* (B Ward.)
BALKRISHNA WASSOODEV PANDOORUNG, MR., J.P., *G*.
BAPTISTA, JOSEPH, MR., LC.E. (Bombay), B.A., LL.B. (Cantab.), BAR-AT-LAW, *R* (E Ward).
§ BHALCHANDRA KRISHNA BHATAWADEKAR, SIR, KT., L.M., J.P., *R* (D Ward.)
BRITTO, J. L., MR., J.P., *C*.
†§ CHIMANLAL H. SETALVAD, THE HON'BLE MR., B.A., LL.B., J.P., *U*.
* CHUNILAL VIJBHUKANDAS MEHTA, MR., M.A., LL.B., *R* (C Ward) (*Chairman* ¡*Standing Committee*).
* COLLIE, M. A. T., LIEUT.-COL., M.B. (Aberd.), C.M., I.M.S., J.P., *J*.
* COWASJI JAHANGIR READYMONEY, MR., B.A. (Cantab.), J.P., *J*.
*‡ DAVID, SASSOON, SIR, BART., J.P.
D'MONTE, D. A., THE HON'BLE DR., M.D., L.R.C.P. (London), L.M. & S., M.R.C.S., J.P., *G*.
† DHACKJEE CASSINATHJEE, RAO BAHADUR, J.P., *R* (C Ward.)
DHARAMSI JETHABHAI THACKER, MR., B.A., LL.B., *R* (D Ward).
DINANATH BALKRISHNA NAIK DANDEKAR, RAO BAHADUR, DR., L.M. & S., F.R.I.P.H. (London), J.P., *J*.
DINSHA BOMANJI PESTONJI MASTER, DR., L.M. & S., J.P., *R* (C Ward).
†‡§ DINSHA EDALJI VACHA, MR., J.P., *R* (A Ward).
DINSHAW MANOCKJI PETIT, SIR, BART., J.P., *J*.
EBRAHIM ADAMJI PEERBHOY, MR., *R* (C Ward).
* EDWARDES, S. M., MR., C.V.O., I.C.S., J.P., *J*.
ELLAPA BALARAM, RAO BAHADUR, J.P., *R* (E Ward.)
§ FAZULBHOY CURRIMBHOY EBRAHIM, THE HON'BLE MR., J.P., *R*. (G Ward.)
* FAZULBHOY MEHERALLY CHINOY, THE HON'BLE MR., J.P., *G*.
GORDON, F. F., MR., J.P., *J*.
GUBBAY, M. M. S., MR., I.C.S., J.P., *G*.
GULAM HUSEN CURRIMBHOY EBRAHIM MR., J.P., *J*.
HAJI SULEMAN ABDUL WAHED, MR., J.P., *G*.
HAJEE YOOSOF HAJEE ESMAIL SOBANI, MR., J. P., *J*.
†‡ IBRAHIM RAHIMTOOLA, THE HON'BLE SIR, KT., C.I.E., J.P., *R* (B Ward).
JAFFER JOOSAB, MR., *R*. (B Ward).
JAFFER RAHIMTOOLA, MR., B.A., BAR-AT-LAW, J.P., *R* (B Ward).
JAMSETJI ARDASEER WADIA, MR., J.P., *J*.
JEHANGIR BOMANJEE PETIT, MR., J.P., *J*.
JEHANGIR DOSABHAI FRAMJI, MR., I.S.O., J.P., *G*.
† JEHANGIR J. CURSETJI, DR., M.D., L.R.C.P., L.R.C.S., *R* (C Ward).
JEHANGIR RUSTAMJI PATELL, MR., B.A., LL.B., J.P., *R* (D Ward).
KARAMALI PEERBHAI HAJI, MR., J.P., *R* (B Ward).
KAVASJI EDALJI DADACHANJI, DR., L.M. & S., J.P., *R* (D Ward).
KAZI KABIRUDDIN, MR., BAR-AT-LAW., J.P., *R* (E Ward).
* McBAIN. J. A. D., THE HON'BLE MR, J. P., *R* (A Ward).
* † MACDONALD, JAMES, MR., J. P., *J*.
MADHAVJI VIRJI, MR., B.A., LL.B., *R* (A Ward).
MAHOMEDBHOY CURRIMBHOY EBRAHIM, MR., J.P., *R* (F Ward).
MAHOMEDBHOY HAJIBHOY LALJI, MR., J.P., *J*.
MILNE, J. S. WARDLAW, MR., J.P., *CC*.
MIRZA ALI MOHAMMED KHAN, MR., M.A., LL.B., J.P., *G*.
MORESHWAR CHINTAMAN JAVLE, DR., J.P., *R* (G Ward).
MULJI B. BARBHAYA, MR., J.P., *G*.
* NADIRSHAW H. E. SUKHIA, DR., L.M. & S., L.V.SC., M.R.S.I. (Londoo), J.P., *R* (A Ward).
*† NARAYEN VISHVANATH MANDLIK, MR., B.A., LL.B., J.P., *J*.
‡ NOWROSJI JEHANGIR GAMADIA, MR., J.P., *R*. (A Ward.)
ORR, J. P., THE HON'BLE MR., C.S.I., I.C.S., J. P., *G*.
§ PHEROZESHAH MERWANJEE MEHTA, THE HON'BLE SIR, K.C.I.E., M.A., BAR.-AT-LAW, J.P., *J*.
*PHIROZE CURSETJI SETHNA, MR., J.P., *J*.
RAMCHANDRA BHASKER MANTRI, MR., J.P., *R* (D Ward).
RATANSHA TEMULJI NARIMAN, DR., M.D. F.R.M.S., J.P., *J*.
SALE, E. L., MR., I. C. S., J.P., *G*.
* SALEBHOY KARIMJI BARODAWALLA, MR., J.P., *R* (E Ward).
SARAFALI MAMOOJI, MR., *R* (B Ward).
SHAPOORJEE SORABJEE MISTRY, MR., *R* (A Ward).
SHAVAKSHA SORABJI BATLIWALA, DR., L.M. & S., J.P., *R* (F Ward).
SHERIF DEVJI KANJI, MR., *R* (B Ward).
SIMKIN, F. H., MR., J.P., *G*.
SOONDERDAS NARANDAS, RAO BAHADUR, B.A., LL.B., J.P., *R* (C Ward).
TAHERALI MAHOMEDALI KAJIJI, MR., M.A. (Oxon), LL.D. (Dublin), BAR-AT-LAW., J.P., *G*.
TEMULJI BHIKAJI NARIMAN, DR., L.M., F.R.M.S. (London), J.P., *U*.
‡ TOD, A. M., MR. J.P., *CC*.
VASANTRAO ANANDRAO DABHOLKAR, MR., J.P., *G*.
VITHALRAO KRISHNAJI VANDEKAR, RAO BAHADUR, J.P., *R* (B Ward).
WHYTE, A. H., MR., J. P., *G*.

NOTE.—The letters against the names signify—*R*, that the Member was elected by the Ratepayers; *J*, by the Bench of Justices; *CC*, by the Chamber of Commerce; *U*, by the University; and *G*, appointed by Government.

NOTE.—The marks against the names signify—*, Member of the Standing Committee; †, Member of the Schools Committee; ‡, Member of the Board of the City of Bombay Improvement Trust; §, Member of the Board of the Victoria Jubilee Technical Institute.

II.—Heads of Departments.

12. Mr. W. E. Waite, Chief Accountant, proceeded on one year's combined leave on 2nd September 1912, and Mr. Manecksha Cawashah Talyarkhan, Deputy Accountant conducted the duties of the Chief Accountant, in addition to his own, from 2nd September 1912 to 30th September 1912, when Mr. R. Peel was appointed acting Chief Accountant, with effect from 1st October 1912.

13. Mr. R. P. Masani, M.A., Municipal Secretary, was on privilege leave from 18th September to 16th December 1912, during which period Mr. P. P. Vagh, Superintendent of Licenses, acted for him.

14. Mr. A. H. Underdown, Chief Inspector, Health Department, was appointed to act as Superintendent of Licenses for the period, during which Mr. P. P. Vagh acted as Municipal Secretary.

15. Mr. W. Nicholls, Chief Officer, Fire Brigade, who was on leave, having been invalided, retired from service on the 17th January 1913, and Mr. T. C. Greenop was permanently appointed as Chief Officer, Fire Brigade, in his place from that date.

16. Mr. C. D. Mahalaxmivala, Superintendent of Gardens, was on privilege leave from 18th October 1912 to 17th January 1913, during which period Mr. J. M. Doctor, Assistant Superintendent, Zoological Collection, acted for him in addition to his own duties

17. Mr. E. J. Hale, Works Inspector, Drainage Department, continued to act as Storekeeper upto 30th April 1912 and Mr. A. G. Christiansen, M.S.E., A.M.I.M.E., was appointed Storekeeper from 1st May 1912.

18. Mr. N. B. Masani, Secretary, Schools Committee, who was on combined leave, resumed charge of his appointment on 1st May 1912 from Mr. Abdul Rehman Bhaiji, B.A., who was acting for him.

19. The following officers continued in their respective appointments throughout the year :—

Mr. James W. Mackison, B.Sc., A.M.I.C.E., Executive Engineer.

„ N. Maughan, M.I.C.E., Deputy Executive Engineer, Drainage.

„ B. H. Hewett, A.M.I.C.E., Deputy Executive Engineer, Mechanical Branch.

„ H. J. Trivess Smith, A.M.I.C.E., M.I.M.E., Hydraulic Engineer.

Dr. J. A. Turner, M.D., D.P.H., Executive Health Officer.

Mr. B. D. Banaji, Assessor and Collector.

„ Sorabji B. Master, Revenue and Refund Audit Officer.

„ L. W. Michael, Superintendent of Markets.

„ Cecil L. Burns, Curator and Secretary, Victoria and Albert Museum.

Rao Saheb Anandrao Wamon Shete, Assistant to Commissioner and Superintendent of Printing and Stationery.

III.—Financial.

I.—GENERAL.

20. The general results of the year have very materially conduced to placing the finances of this Municipality on a sound basis and augmenting the margin of its borrowing powers.

The year opened with a working Cash Balance of Rs. 38,69,352. The income realized during the year amounted to Rs. 1,27,41,590, while the expenditure aggregated Rs. 1,16,81,587, the resulting surplus being Rs. 10,60,003.

Out of this surplus, Rs. 3,10,053 were utilized for further reduction of the balance of Plague Expenditure, *viz.*, Rs. 4,10,053, outstanding as an advance from Loan Funds, leaving a balance of only Rs. 1,00,000 for the writing off of which a provision has been made in the Budget for 1913-1914. The year closed with a working Cash Balance of Rs. 46,29,577, of which Rs. 10,17,956 is reserved for lapsed grants required to be renewed in 1913-14. The surplus Cash Balance at the close of the year thus amounted to Rs. 36,11,621, including the minimum of Rs. 1,00,000 required by law, and Rs. 9,25,000 ear-marked for payment to the City Improvement Trust on 1st May 1913. From this balance, advances for New Works on Capital Account were sanctioned by the Corporation to the extent of Rs. 16,59,130 upto 31st March 1913, which, however, will be recouped when the loans are raised.

II.—Income.

Income compared with 1911-1912.

21. The rates of taxation continued to be the same as in the preceding year, but owing to the revision of assessments and the construction of new buildings in the City there was an expansion in our revenues, the income realized during the year, *viz*, Rs. 1,27,41,590 being better than that of the previous year by Rs. 6,04,702. The increases were principally derived from the Property Taxes, Wheel Tax and Tolls, Town Duties, Market Receipts, Miscellaneous Receipts, and Interest on Investments of Surplus Loan and other balances. The reasons for the variations have been explained in para. 25 of the Acting Chief Accountant's report, the permanent expansion of our revenue for the year being placed by him at Rs. 3,51,000, *vide* paras. 26 and 27 (*ibid*). Although the taxes remained stationary during the year, there was a rise in the incidence of taxation per head of population from Rs. 10-13-2 in 1911-12 to Rs. 11-8-5 in the year under report, owing to the increase in income.

Income compared with Estimates.

22. As compared with the Budget Estimates there was an increase of Rs. 7,41,090. Eliminating the unusual receipts from Wheel Tax and Tolls (Rs. 25,920), Town Duties (1,30,000), Licenses (Rs. 20,000), Water Tax and Miscellaneous Water Works Revenue (Rs. 1,00,000), Market Receipts (Rs. 52,313), Miscellaneous Fines (Rs. 19,121), Miscellaneous Receipts (Rs. 1,08,584), and Interest on Investments (Rs. 1,35,834), the net increase amounted to Rs. 1,49,318 on a total estimate of Rs. 1,20,00,500 or a deviation of only 1·2 per cent. As compared with the Revised Estimates the actual receipts were in excess by Rs. 3,96,090 or a deviation of 3·2 per cent.

III.—Expenditure.

Expenditure compared with grants.

23. During the year under review the actual expenditure amounted to Rs. 1,16,81,587 against sanctioned grants aggregating Rs. 1,31,00,589, leaving an unexpended balance of Rs. 14,19,002. Of the latter amount, Rs. 10,17,956 represent grants to be renewed, and Rs. 4,01,046 the net savings.

Savings and Renewals.

24. The reasons for the large savings in expenditure, and the heavy renewals of grants have been fully dealt with in paras. 35 to 39 of the Chief Accountant's report. The expenditure does not include the item of Rs. 3,10,053, the amount specially voted by the Corporation for the writing off of a portion of Plague Expenditure advanced from Loan Funds. It also excludes the transactions relating to the investments of interest realized on sinking and other funds which were hitherto shown in the expenditure account, although they did not really represent actual expenditure. The percentages of grants allowed to lapse, and of savings in expenditure show great inaccuracy in estimating requirements, and it, therefore, devolves on the heads of departments to exercise greater care in estimating their allotments and to show more promptitude in carrying out works budgetted for, before the close of the year. The amount of additional grants made exceeded those of last year by Rs. 75,021, but the special grant of Rs. 1,00,000 voted during the year as a contribution towards the erection of a building at Apollo Bunder to commemorate

Additional grants.

the visit of His Majesty the King Emperor of India more than accounts for the difference and, therefore, the additional grants were satisfactorily maintained at as low a figure as possible.

Comparison with 1911-12.

25. The expenditure, as compared with last year, showed an excess of Rs. 7,15,926; the increases aggregated Rs. 8,36,761 and the decreases Rs. 1,20,835. The variations have been dealt with in para. 40 of the Acting Chief Accountant's report. The Chief Accountant estimates the permanent increase in expenditure at Rs. 2,33,000 as explained in paras. 41 and 42 and the expansion in income at Rs. 3,51,000 as stated in para. 21 above. It may, therefore, be safely concluded that our financial policy is on a sound basis.

IV.—Loan Works Expenditure.

Loan Works expenditure.

26. The expenditure on Loan Works amounted to Rs. 17,87,921 against Rs. 19,70,182 in the preceding year, the decrease being noticeable entirely under Buildings and Sanitary Structures and Drainage. There were large lapses on both the original and the revised estimates as pointed out by the Chief Accountant in para. 53 of his report, and measures were taken to reduce the Loan balances to a figure nearer our estimated requirements by postponing the raising of the second instalment of Rs. 25 lakhs of the 55 lakhs loan to 1913-1914.

V.—Plague Expenditure.

Plague Expenditure.

27. The expenditure on Plague measures during the year amounted to Rs. 1,47,763 showing a decrease of Rs. 8,140 on the expenditure of the previous year, which also showed a considerable decrease on the preceding year. This is ascribed to fewer patients having been treated in the Maratha Hospital during the year. The total outlay on plague measures from the outbreak of plague up to the close of the year under review aggregated Rs. 77,22,213 as pointed out in para. 55 of the Chief Accountant's report.

VI.—Capital Debt.

Capital Debt.

28. No loan was raised during the year under review. The second instalment of Rs. 25 lakhs of the 55 lakhs Loan for Miscellaneous works, the raising of which was contemplated during the year, was postponed to 1913-14 in view of the sufficient Loan Funds Balances then available. The payment made by the Municipality during the year towards the reduction of debt amounted to Rs. 1,18,831, which reduced the Capital Liabilities of the Corporation from Rs. 5,91,60,747 in 1911-12 to Rs. 5,90,41,916 during the year.

Sinking Fund.

Sinking Fund.

29. The total Sinking Fund invested up to the close of the year amounted to Rs. 1,26,39,883, leaving the net debt liability of the Corporation at the close of the year at Rs. 4,64,02,033. From Appendix No. 7A attached to the Chief Accountant's report, it will be seen, that the aggregate total of the different Sinking Fund Investments on 31st March 1913 was in excess of the amount which should have accumulated for the purpose for which the funds have been created by Rs. 7,546-9-0. The market value of the investments on the whole is also well in advance of the face value (*vide* para. 51 of the Chief Accountant's report).

Suspense Accounts.

Reserve stores.

30. The reserve stock of stores on 31st March 1913 amounted to Rs. 4,50,267 of which Rs. 26,868 represented the value of surplus and obsolete stores.

During the year the current serviceable stores stood at Rs. 3,01,553 against Rs. 3,07,380 in the preceding year. The balance of surplus and obsolete

stores has been reduced to Rs. 26,868 and a further reduction will be effected when the surplus and obsolete stores of the Drainage Department which have recently been engaging my attention are disposed of.

Test Audit.

31. The subject of Test Audit has been dwelt upon by the Chief Accountant in paras. 85 to 89 of his report. The advantages of enforcing and extending this audit may be gauged from the results so far attained with a comparatively small staff at the disposal of the Chief Accountant.

Miscellaneous Funds.

The Premia.

32. The Net Premia, Fire Insurance, and Worn Out Water Mains Renewal Funds were all in a satisfactory condition at the close of the year, as will be seen on a reference to paras. 63-65 of the Chief Accountant's report. The amount to the credit of the Net Premia Fund stood at Rs. 2,05,858 at the close of the year.

Fire Insurance Fund.
Water Mains Renewal Fund.

33. The Municipal Buildings Fire Insurance Fund stood at Rs. 1,67,012 and the balance in the Worn Out Water Mains Renewal Fund stood on the 31st March 1913 at Rs. 5,36,515.

34. The surplus to the credit of the Fire Tax amounted at the close of the year to Rs. 87,700 (*vide* para. 90 of the Chief Accountant's report).

35. As required by the Standing Committee's Resolution No. 12212, dated 3rd February 1892, the net Revenue and net Expenditure for 1912-13 and the preceding year are given in the following statement :—

Particulars.	1911-12.	1912-13.
Net Revenue after deducting Refunds, Drawbacks and charges in respect of Assessment and Collection and granting of Refunds.	Rs. a. p.	Rs. a. p.
General Tax	46,30,929 6 3	46,05,168 13 2
Fire Tax	53,868 15 8	.....
Wheel Tax and Tolls	4,63,517 0 0	5,17,313 10 6
Town Duties	11,22,797 5 8	15,60,862 12 11
Receipts from Government for Liquor Licenses and Tobacco Duty	4,22,646 1 8	4,27,275 12 0
Water Revenue (net)	1,89,496 8 11	2,18,415 5 7
Market Receipts	3,72,747 8 7	3,89,198 12 2
Returns from other Property and Miscellaneous	5,85,247 9 1	5,56,641 12 1
Net Receipts ... Rs.	78,41,550 7 10	82,74,876 14 5
Net Expenditure after deducting Receipts.		
General Superintendence	2,56,527 9 1	2,74,400 7 10
Fire Brigade	.....	88,545 12 8
Public Gardens	56,098 0 6	63,624 2 6
Public Works (Engineering Department excluding Water Works)	18,30,343 4 9	19,28,004 3 6
New Works (excluding Water Works)	1,87,739 3 7	1,34,385 5 10
Public Health Department (excluding Markets)	5,11,349 15 5	6,35,517 3 9
Municipal Debt (excluding Water Works)	17,43,466 5 10	18,27,222 5 4
Education	4,20,303 15 9	4,18,507 2 3
Hospitals	4,72,857 9 1	4,46,160 0 0
Pensions, Gratuities and Compassionate Allowances	32,683 10 4	66,056 14 2
Miscellaneous	1,38,050 0 10	2,69,688 0 7
Contribution to the City Improvement Trust	8,65,000 0 0	9,25,000 0 0
Plague Expenses	1,55,903 0 0	1,47,763 0 2
Net Expenditure ... Rs.	66,70,322 11 2	72,14,874 10 7
Surplus	*11,71,227 12 8	†10,60,002 3 10
Total ... Rs.	78,41,550 7 10	82,74,876 14 5

* This amount includes Rs. 5,00,000 sanctioned for writing off a portion of the Plague Expenditure paid out of Loan Funds.

† This surplus includes Rs. 3,10,053 sanctioned for the further write-off of a portion of the Plague Expenditure advanced from Loan Funds.

36. The Revenue, Expenditure, and Balances of the last five years have been contrasted in the following table :—

	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
	Rs.	Rs.	Rs.	Rs.	Rs.
Revenue	(a) 1,02,86,048	(d) 1,12,13,864	(g) 1,21,96,149	(i) 1,26,55,789	(m) 1,27,41,589
Expenditure	(b) 1,06,30,126	(e) 1,13,97,050	1,12,81,872	(j) 1,14,84,562	(n) 1,16,81,587
Closing balance (including recoverable advances to Loan Works, Reserve Stock, &c., and excluding Minor Deposits, &c.) ...	(c) 30,38,590	(f) 28,55,404	(h) 36,58,663	(k) 43,29,894	(o) 50,79,844
Add—Recoverable Revenue outstanding ...	1,17,761	1,01,232	1,05,400	62,797	43,679
	31,56,351	29,56,636	37,64,063	43,92,691	51,23,523
Deduct—Uncompleted Works, &c., and unexpended balances of the grants which were required for payment in the following year ...	7,12,338	5,67,953	6,61,178	(l) 8,96,295	(p) 10,17,956
Net Workable Balance available for requirements of the following year	(c) 24,44,013	(f) 23,88,683	(h) 31,02,885	(k) 34,96,396	(o) 41,05,567

(a) Includes large increases in Property Taxes and Miscellaneous receipts.

(b) Includes large increases principally under Public Works, New Works, Health Department, Contribution to the City Improvement Trust and Debt.

(c) Excluding Rs. 7,25,152 on account of the value of Reserve Stock on hand on 31st March 1909, the net closing balances amounted to Rs. 23,13,438 and Rs. 17,18,861 respectively.

(d) In this year the General Tax was raised from 8 to 9⅛ %. There was also an increase in the Town Duties.

(e) Includes large increases principally under General Superintendence, Public Gardens, New Works, Contribution to the C. I. Trust, Education, Miscellaneous and Debt.

(f) Excluding Rs. 6,58,864 on account of the value of Reserve Stock on hand on 31st March 1910, the net closing balances amounted to Rs. 21,96,540 and Rs. 17,29,819 respectively.

(g) In this year the General Tax was raised from 9⅛ % to and Fire Tax from ¾ % to 10⅛% and ½% respectively. The Town Duty on grain also was increased from As. 4 to As. 6 and the maximum duty of As. 2 per Khandy imposed on firewood.

(h) Excluding Rs. 5,09,340 on account of the value of Reserve Stock on hand on 31st March 1911, the net closing balances amounted to Rs. 31,49,323 and Rs. 25,93,545 respectively.

(i) Notwithstanding that the rates of taxation continued to be the same as in last year, there were large increases under "Taxation Proper" and "Services rendered" and also under "Returns from Property & Miscellaneous."

(j) Includes increases principally under Public Works, New Works, Health Department, Contribution to the C. I. Trust and Debt.

(k) Excluding Rs. 4,60,542 on account of the value of Reserve Stock on hand on 31st March 1912, the net closing balances amounted to Rs. 38,69,352 and Rs. 30,35,854, respectively.

(l) Includes the large amounts required to be renewed under Fire Brigade, New Works and Public Health on account of supplies of engines, pipes, motors, etc., having been delayed owing to strikes in England.

(m) Notwithstanding the transfer of interest realized on Sinking and Special Funds to a suspense head and that the rates of taxation continued to be the same as in the preceding year, there were large increases under "Taxation Proper" and "Services rendered."

(n) This is exclusive of the investment of the interest realized on Sinking and other funds transferred to a suspense head. It includes, however, increases principally under "General Superintendence," "Assessment and Collection Department," "Fire Brigade," "Public Works," "Health Department," "Miscellaneous," "Contribution to the City Improvement Trust" and "Debt."

(o) Excluding Rs. 4,50,267 on account of the value of Reserve Stock on hand on 31st March 1913, the net closing balances amounted to Rs. 46,29,577 and Rs. 36,55,300, respectively.

(p) Includes the large amounts to be renewed chiefly under New Works, Public Works, Health Department, Gardens, Debt and Miscellaneous.

IV.—Assessment and Collection of Revenue.

37. The total amount collected under all heads exclusive of miscellaneous receipts and toll fees was Rs. 86,99,671-3-3 against Rs. 85,65,972-1-8 last year showing an increase of Rs. 1,33,699-1-7. The final gross assessment was Rs. 5,51,71,774 against Rs. 5,36,02,464. This was assessed on 61,336 properties against 59,721 properties in the previous year. The assessment for General Tax was Rs. 4,74,00,118 against Rs. 4,60,48,890 for the previous year giving an increase of Rs. 13,51,228. The number of buildings newly erected, demolished and enlarged was 814, 826 and 306 respectively. Complaints against assessment

were 3,799 against 5,737 in the previous year. The demand for the water rate was Rs. 21,18,830 against Rs. 20,16,354 showing an increase of Rs. 1,02,476.

38. The demand for halalkhor service was Rs. 13,54,792 against Rs. 13,06,569 showing an increase of Rs. 48,223. In all the total demand for property tax was Rs. 85,23,174. From this sum Rs. 56,202 were allowed as 1/5th drawback of the General Tax the result of 7,244 claims. The outstanding on the 31st March 1913 was Rs. 6,581 on account of former years and Rs. 45,000 for the year under report, making a total outstanding of Rs. 51,581 against Rs. 68,114.

39. The tax on vehicles and animals showed an increase, the demand being Rs. 2,34,858 against Rs. 2,15,054 in the previous year. Out of the total demand, including previous years' arrears, of Rs. 2,37,854, Rs. 1,935 were outstanding at the end of the year. 704 motor cars and 94 motor cycles were taxed.

40. The miscellaneous receipts amounted to Rs. 36,464 against Rs. 35,916, while the receipts from the toll rights at the Mahim and Sion Causeways amounted to Rs. 21,683 against Rs. 21,100 in the previous year.

41. There were three appeals to the Chief Judge of the Small Causes Court, of which two were settled out of Court and withdrawn by the Appellants and one was dismissed with costs.

42. During the year under report the arrangement with the Mill-owners' Association in regard to the basis of assessment of Spinning and Weaving Mills in the City was revised with effect from 1913-14.

43. The following is the new mode of assessment:—

(1) The valuation is to be calculated at 4 per cent. on the value of the land and 6 per cent. on the value of the buildings used for the *bona fide* business purposes of Mills and Dye-works.

(2) All lands used for storing and stacking purposes and lands required for the general purposes of the Mill in the Mill compound are to be assessed with the buildings.

(3) Chimneys and tanks are also to be assessed with the buildings.

(4) Lands purchased for future extension and not actually used for Mill purposes are to be assessed separately according to the rateable value of similar land in the neighbourhood allowing, if necessary, a rebate, if the area is so large that it could not, if not used for Mill purposes, have been easily let. These lands are to be kept separate from the land actually used for Mill purposes, and fencing or boards must be put up to show that these lands are reserved for future extensions. These lands are to be assessed at 4 per cent. on value when used for Mill purposes and assessed with the buildings.

(5) Quarters for Managers, and Spinning, Weaving and Carding Masters and others and stables which are at present assessed on the rental basis are to continue to be so assessed.

44. The work of the department was successfully carried on throughout the year,—the very small amount of outstandings is especially creditable.

REVENUE AUDIT.

45. The books and balances of the Ward clerks in the seven ward offices were duly examined at the end of each quarter and the bills were checked in detail after comparison with the Head Office Accounts. The Assessment Books in the Head Office were also examined to ascertain that no property liable to taxation had escaped assessment. The Vehicle and Animal Tax Book maintained under Section 186 of the Municipal Act was examined and checked. The revenue from the tax on Public Land Conveyances licensed by the Commissioner of Police under Act VI of 1863, was audited and certificates of issue

of licenses supplied by that Officer checked with the Register kept in the Chief Accountant's Office. The books of the Toll Farmers at Sion and Mahim Causeways were checked as were the revenue receipts and vouchers of the different departments. The number of claims to 1/5th drawback under Section 153 (2) of the Municipal Act scrutinized aggregated 7,244 of which 3,565 were admitted. The number of complaints against valuation under Section 163 of the Municipal Act heard by the Revenue and Refund Audit Officer aggregated 768. The number of decisions on complaints against amendments under Section 167 of the Act scrutinized amounted to 352. The number of claims sanctioned for refund on account of vacancy under Sections 174 to 179 of the Act and on account of over collection aggregated 1,994 representing Rs. 58,387-15-6.

TOWN DUTIES.

46. The total collections for the year amounted to Rs. 38,47,929-1-4 against Rs. 31,48,247-10-8 for the previous year, while the amount refunded was Rs. 21,16,035-11-0 against Rs. 17,95,040-11-0, the net revenue being thus Rs. 17,31,893-6-4 against Rs. 13,53,206-15-8 in the previous year showing an increase of Rs. 3,78,686. This is the largest revenue yet recorded from Town Duties. As a considerably larger staff was employed, the increase might at first sight be considered due to better supervision over refunds. Refunds also, however, were unprecedently large, and the proportion of refunds to collections was almost as high as in the previous year, being 55 per cent. against 57 per cent. Considering the prosperity and increased population of the City, and the fact that the stock of sugar had become depleted owing to the small imports of the previous year, it would be unsafe to assume, without further experience, that the increased staff was the predominant factor in this substantial enhancement in the revenue from Town Duties or that the enhancement can be regarded as permanent. The number of refund claims was, however, 60,359 against 50,906 in the previous year, and the new staff is probably necessary to prevent abuse in this increasing branch of work.

47. The system of marking sugar bags with the Municipal mark is still optional, the opposition of small importers having been too strong to permit of any other course. It may be hoped, however, that the larger firms will see the advantage of the system in simplifying refunds, and will adopt it to an increasing extent voluntarily.

48. The Department had a great deal of work in the year. There is a natural tendency for such work to be done in a formal and lifeless manner, and there are not wanting signs that this fault has been present in the department. It is the business of all officers of the department to see that their work is done intelligently without being officious or interfering.

V.—Public Works.

DRAINAGE.

49. Although the Engines and Pumps at the Love Grove Pumping Station worked fairly well during the year, it is satisfactory to know that the work of erecting the new engines with the necessary buildings is so near completion, as the existing engines and pumps are no longer equal to the increasing amount of work thrown upon them. During the year the erection of the machinery in the Screening and Dredging Chamber was completed, and the electric machinery in connection with it temporarily housed, so that it should be possible to use the chamber in the present monsoon. The Engine House was completed and much of the machinery installed, while considerable progress was made with the Boiler House. The whole work should be in full working order during 1913-14.

50. As Sir John Wolfe Barry's report on the scheme for the New Low Level Sea Out-fall at Love Grove differed on material points from previous proposals, advantage was taken of the presence of Mr. G. Midgley Taylor to consult him. His report satisfactorily confirmed the recommendations already received. Fresh soundings however were necessitated as a direct line of pipes for the out-fall was recommended in place of the existing deflected line. Delay has been caused thereby, but it is hoped that the work will soon be put out to contract. This is the first of the important drainage works impending. The others are (1) the diversion of the S. W. Channel from Love Grove to Worli, and the provision of Pumps to serve all the S. W. Channels at Worli, (2) the Sewerage of the north of the Island, and (3) the enlargement of and addition to the old sewers in consequence of the increased water-supply. These works are all under consideration, and will fully employ the energies of the Drainage Department for some years.

51. The Machinery at the Colaba Air Compressor Station and the Ejector Stations served from it worked satisfactorily during the year. The total quantity of sewage lifted during the year was 395½ million gallons.

52. The Machinery at the Love Grove Air Compressor Station and the several Ejector Stations in the Parel, Chinchpokli, Agripada, Malabar Hill and Mazagon Districts also worked on the whole satisfactorily during the year, though constant difficulties in the system are found to occur at different points. The total quantity of sewage lifted by the ejectors worked from the Love Grove Air Compressor Station was 1,669,852,950 gallons.

53. Of the large drainage works in progress, the scheme for draining the High Lands from Byculla north to Dadar into the harbour has made good progress, as the sections from Byculla bridge down the Connaught and Reay Roads were in working order, and carried off a large amount of water. Good progress has been made in the section from Sopari Baug Road, and along Reay Road, and when these are linked up as they should be in the present year, this extremely expensive, though very necessary, undertaking should be fully useful. The celerity with which the contracts for this and other drainage works have been pushed through by the Drainage Engineer is very satisfactory. The sewerage of the Elphinstone Reclamation District was taken in hand during the year. This work presents difficulties owing to the low levels, and the amount of sub-soil water met with, but should be prosecuted successfully in the present year. Many other smaller drainage works were also carried out during the year, the details of which will be found in the Executive Engineer's report and this represents many small improvements. The substitution of stronger and more mosquito proof water entrances is necessary throughout the town, but this can only be done gradually. The necessity for erecting more public latrines and urinals throughout the city must be kept constantly in view. 208 house drainage street connections and 65 storm water connections were made during the year. Action to get properties in the Malabar Hill District connected with the new sewers was continued during the year; out of 15 notices served, thirteen were complied with; in two cases the works were in progress. In all 51 common house gullies were remodelled up to the end of 1912-13.

REGULATION OF STREETS AND BUILDINGS.

54. The number of applications for permission either to build or rebuild houses, &c., aggregated 3,618 against 3,404 during the past year. 4,518 notices were issued on house-owners under various Sections of the Municipal Act. This number is less than the previous year's total by 1,391. In 1,314 cases prosecutions were instituted in the Magistrates' Courts against house-owners for not complying with the notices served upon them against 1,608 in the previous year. It is to be hoped that the decreased number of notices and prosecutions indicates greater carefulness on the part of owners and builders to observe Municipal

requirements, but this cannot unfortunately be asserted with any certainty. Out of the 1,314 cases, in 668 the parties complied with the Municipal requirements before the service of the summonses and the cases against them were therefore withdrawn. In 159 cases the parties were warned and discharged ; in 314 cases they were convicted and fined and 173 cases were pending at the close of the year. 522 notices were issued for the removal of unsafe and dangerous or ruinous buildings ; 427 of these were complied with either partly or wholly and in 44 cases the structures were removed by the Municipality and 51 cases were pending at the close of the year. 21 buildings or parts of buildings fell during the year. In 18 cases no injury was done and in the remaining three cases 10 persons were killed and 7 were slightly injured. The principal collapse was the subject of prolonged enquiry and has been separately reported upon. Action was taken for the removal of 516 inflammable and insanitary huts ; of these 426 were removed and 90 cases were pending at the close of the year. Four cases had to be submitted to the Standing Committee for the removal of unauthorised work. This is a decided improvement on previous years, but here again any relaxation of watchfulness would be very dangerous. Ground measuring 25,829·47 square yards estimated to cost Rs. 3,95,102-5-10 was added to the streets. This is about treble the area that was added last year, and is much larger than in any previous year, while the amount of the cost was not so great. This is due to the large acquisition in G ward and it is necessary that in F ward land required for roads should be actively taken up. Great care has been taken in judging whether setbacks should be taken, and it is satisfactory to note that the amount of increased commitment was much less than in some previous years. I am glad to record the good work of the Building Superintendents in this Branch. The actual sum paid for setbacks which included some enforced in previous years was Rs. 325,623-9-1.

ROADS.

55. The area of roads metalled (full metalling and full patching) during the year was 50,17,009 square feet at a cost of Rs. 2,45,932-1-5, the rates for full metalling and full patching working out to 10·56 pies and 7·07 pies per square foot respectively. This is a higher rate than last year, but is still within the standard of Rs. 5-12-0 per 100 square feet for a 3" coat of metal. This is the more creditable as it has been necessary to raise the wages of all workmen by 16 per cent., and it has also been necessary on account of heavy motor vehicles to thicken the coat of metal, and to provide rubble stone bottoming on the main thoroughfares. It is often forgotten that most of the City roads were made chiefly without any bottom. These roads were always muddy and will not stand modern traffic. Portions of 32 roads were thus strengthened by heavy metal coating during the year, and the average cost of doing so was Rs. 7-13-3 per 100 square feet against the average of Rs. 4-8-5 for portions treated in the ordinary way. Out of 165 miles of roads 33½ miles were disturbed in connection with pipes, cables, &c. The operations of the Bombay Electric Supply and Tramways Co., Ld., the Gas Co., the Telephone Co., and the Tata Hydro Electric Co., being responsible for nearly 21 miles of this. These constant disturbances add to the difficulty of keeping the roads in good repair. The tarring of roads continued to prove beneficial and the area so treated was 17,75,566 square feet at a cost of Rs. 59,345. If more tar was available it would be used to a much greater extent. It continues however to be liable to become slippery and dangerous for horses. In order to economise in the use of water for the roads a grant of Rs. 40,000 was sanctioned by the Corporation in February 1913 for the use of Akonia. Watering over many of the roads had to be greatly reduced. Portions of Victoria Road, Mayo Road, Arthur Road and the private road leading from Arthur Road to the Mahaluxmi Cutchra Siding were widened during the year but the most important widening and improvement was that of Worli Road from its junction with Fergusson Road northwards for a distance of about 2,500 feet which was in progress at the end of the year. The length of new roads taken over in the year was not great, 3 short streets

constructed by the Improvement Trust and 3 private streets improved in accordance with action taken under Section 305 of the Municipal Act being taken over by the Municipality during the year. A considerable number of private streets are under action for improvement. Road making in the north of the Island is provided for to a very appreciable extent during the present year. Considerable progress was made in the forming of new footpaths. Tree planting received attention to the extent of 220 new trees, but good deal more has to be done.

56. No extension of Tramways was carried out during the year with the exception of the renewal of about 120 feet of rails on Byculla Bridge and an additional siding laid on Foras Road leading to the Co.'s Stables. The Tram tracks were fairly well maintained, several points being still in dispute between the Company and the Municipality.

OVERBRIDGES.

57. The construction of the Clerk Road Overbridge over the G. I. P. Railway was completed during the year. At the Elphinstone Road Overbridge the major portion of the iron work has been fixed in position and the work of forming the road surface on the east approach was in hand at the close of the year. The work of diverting the sewers, storm-water drains and water mains in connection with the Curry Road Overbridge having been completed the Railway Co. have begun the bridge work. The diversion of ovoid sewers, storm-water drains and pipe sewers in connection with the Clerk Road Overbridge (B. B. & C. I. Railway) has been completed. The work of diverting the water mains is nearing completion and the land is almost ready for being handed over to the Railway Co. All the properties required for the DeLisle Road Overbridge (B. B. & C. I. Railway) according to the original alignment of 40 feet width have been acquired; but fresh proposals for widening the bridge to 80 feet are under the consideration of the Corporation, and this will involve delay in the undertaking of this important bridge. The certified expenditure for overbridges at the close of the year amounted to Rs. 5,88,917-4-3.

58. The negotiations with the Railway Companies with regard to the construction of the overbridge at Dadar have resulted in a very satisfactory settlement being arrived at and the final approval of the Corporation only is needed for the work to be taken in hand.

PUBLIC LIGHTING.

59. The total number of gas lamps at the end of the year was 5,508 an increase of 171 over the previous year and the total number or Kerosine oil lamps was 1,778 a decrease of 55. The total cost of gas lighting amounted to Rs. 3,59,899-3-4 an increase of Rs. 21,665-8-7 and the net cost of Kerosine oil street lighting amounted to Rs. 33,782-5-10 an increase of Rs. 545-15-0. Considerable improvement has been made in the lighting of several important thoroughfares.

MUNICIPAL WORKSHOPS.

60. The Municipal Workshops were fully employed during the year in the repair of plant and machinery used by the different departments, and in the manufacture of new articles. The increased amount of mechanical transport employed and the larger variety of pumping and other machinery makes the work of the department increasingly important. The working showed a satisfactory estimated balance in favour of the Workshops of Rs. 2,333-13-2 on the year's working. The bills preferred to the various departments amounted to Rs. 1,93,218-4-2.

61. The masonry and steel works of the first section of the new Municipal Workshops at Foras Road and the supply and erection of boilers

shafting, machinery, etc., for this section was completed during the year. The plans and estimates for the second section were practically completed at the close of the year.

62. The four motor cars provided for the Engineering and Health Departments were in active use running 24,910 miles at a running cost of 5·32 annas per mile. This greatly increased mileage shows how essential the cars are for Municipal Works ; they have greatly increased the amount of supervision and inspection exercised.

WORKS IN CONNECTION WITH PLAGUE MEASURES.

63. The Sanitary, Water and Lighting arrangements at Health Camps erected by private parties and by the Municipality were, as in former years, provided at Municipal expense.

WATER WORKS.

64. *Tansa Lake.*—The rainfall was 88·12 inches against 69·23 inches in 1911 and was 3 per cent. below the average. From the beginning to the end of the monsoon 67,174 million gallons of rain fell on the catchment area of 33,600 acres. Out of this quantity 39,671 million gallons or about 58 per cent. of the total rainfall was received in the lake.

65. The lake began to overflow on 21st July, when the rainfall amounted to 47·69 inches and continued to overflow until the 8th September. The total quantity of water that passed over the waste weir was about 28,522 million gallons, or about 73 per cent. of the quantity received in the lake. The quantity of water delivered into the duct at the lake was about 7,023 million gallons of which 6,258 million gallons were received in the City, the balance 765 million gallons being lost by evaporation, overflow from Syphon heads and leakage. The total leakage found at visible leaks between Tansa and Ghatkoper amounted to ·81 million gallons per day. Practically all the visible leaks in the duct between Pokran and Ghatkoper were repaired during the year resulting in a saving of ·96 million gallons per day. There were 3 bursts on the Tansa main during the year, all of which were promptly repaired. The purity of the water in the lake was of a very high standard throughout the year. The condition of Tansa and of the pipes leading thereform may therefore be said to have been satisfactory, but the necessity for immediately increasing the supply has been further emphasised.

66. *Vehar Lake.*—The rainfall was 69·55 inches against 60·27 inches in 1911 and was 16·6 per cent. below the average. The total rainfall on the catchment area of 3,900 acres amounted to 6,154 million gallons and about 3,384 million gallons, or 55 per cent. of this quantity was received into the lake. The lake did not overflow during the year. Short rainfall following the failures of the previous two years resulted in the level of water in the lake being dangerously reduced. The curtailment of the supply from this lake to the extent of 3¼ million gallons per day, which was effected on 7th November 1911, was therefore continued throughout the year. The total quantity of water received in the City from the Vehar Lake through the 32″ and 24″ mains was 2,868 million gallons giving an average of 7·8 million gallons per day. There were six bursts on the 32″ main and the purity of the water in the lake was well maintained throughout the year notwithstanding the low level of the lake.

67. *Tulsi Lake.*—The rainfall was 77·25 inches against 70·35 inches in 1911, or 24 per cent. below the average. The total rainfall on the catchment area of 1,700 acres amounted to 2,979 million gallons, and it is estimated that 1,859 million gallons, or 62 per cent. of this quantity, was received into the lake. The lake did not overflow during the year. The total quantity of water received in the City was 1,216 million gallons, or an average of 3·3 million gallons per day. There were no bursts, accidents or interruptions in the supply during the year.

68. The water proofing works at the Malabar Hill Reservoir, which were commenced on 13th July 1911 were continued during the year. The four original filter-beds have been thoroughly repaired and brought into use. Out of the two reservoirs the water proofing of one was completed and the work of the other has progressed satisfactorily. The water proofing of the Bhandarwada Reservoir, which was completed last year, resulted in leakage ceasing apparently entirely. The filter-beds at Vehar were not used during the year as the height of water in the Vehar Lake at the close of the monsoon of 1912 was not sufficient to deliver it at the filters.

69. The work of renewing, enlarging and making additions to the water mains was continued during the year, 8·07 miles of new pipes having been laid.

70. There were 57 bursts during the year against 41 during the past year, 76 during 1910-11 and 117 during 1909-10. 50 of these bursts were on the small 3, 4 and 6 inch mains. The number of new connections made was 640, while 267 were disconnected for various reasons, the total number of connections standing at the close of this year was 23,954. The number of cases in which the sanction of the Standing Committee was obtained for disconnections aggregated 572, but in 77 cases only the disconnections had to be enforced, the parties having complied with the Municipal requirements in the remaining cases.

WATER WORKS SPECIAL BRANCH.

71. 918 underground and 28,162 above ground defects were detected and remedied. The total length of mains of all sizes sounded during the year was 45 miles and 3,330 feet. The Waste Prevention Branch has certainly reduced the amount of water lost very appreciably. Notwithstanding the increasing demand, and the fact that it was necessary to curtail the supply throughout the year, complaints were fewer than in the previous year, and public demands such as those of the Fire Brigade were fully met. There were, of course, many individual cases of inconvenience, and even hardship. But they would have been far more numerous if the work of distribution had not been so carefully attended to by the Department, and supervised by the Water Engineer personally. The severe outbreak of cholera naturally led to suggestions and imputations being made against the purity of the supply, which were proved to be unfounded. In the present hot weather, with an even lower supply, there has been no water-borne sickness. The necessity for increasing the water supply is, however, a most urgent one, and it is, therefore, satisfactory to record that during the year the final stage was reached in the decision on the question of an increased supply of water to the City. On 2nd May 1912 the Corporation sanctioned the undertaking of the following works :—

(1) Raising the Tansa Dam.

(2) Widening earthwork embankments along the Tansa Syphons.

(3) Removal of villages from the Tansa Catchment area.

The first and second works have been actively pushed on by the Contractors, Messrs. Pallonji Edalji & Sons and it is expected that they will be completed within the contract periods, which expire on 31st May 1914 and 17th September 1913 respectively.

72. The most important question regarding the material to be used for the syphons of the duplicated pipe line was referred to Mr. G. Midgley Taylor, who was specially invited to India to report on the subject. Mr. Midgley Taylor arrived in India in June 1912 and visited the various works, and on his return to England submitted his report, in which he agreed with the Hydraulic Engineer's proposals for employing steel north of Ghatkoper, and cast-iron south of it. The tender of Messrs. Mephan Ferguson Proprietary Ltd., has accordingly been accepted for the steel pipe portion of the work, and since the close of the year that of Messrs. Turner Hoare & Co. for the cast-iron portion. This work is thus

well in hand. The remaining urgent work is the construction of the Reservoir at Ghatkoper.

73. The working of the Department in a difficult year has been very satisfactory.

GENERAL STORES DEPARTMENT.

74. The following figures show the value of Stores purchased and issued during the year, including transfers and the balance in hand at the commencement of the year :—

Particulars.	General Stores.	Surplus and obsolete Stores.	Line Suspense Account.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Value of Stores in hand on 1st April 1912... ...	2,98,762 14 3	34,718 7 7	1,14,951 6 5
Value of Stores purchased or added, including transfers during 1912-1913...	5,95,207 4 5	149 4 9	5,715 3 8
Total value Rs. ...	8,93,970 2 8	34,867 12 4	1,20,666 10 1
Less—			
Value of Stores issued including transfers ...	6,01,874 8 11	7,999 5 7	4,334 5 4
Balance Rs. ...	2,92,095 9 9	26,868 6 9	1,16,332 4 9
Add—			
Discrepancies adjusted as per clause 29 of the Stores and Stores Manual against rate adjustment account	125 11 9	.....	.....
Balance in hand on the 31st March 1913 ...	2,91,969 14 0	26,868 6 9	1,16,332 4 9

75. The work of verifying the Stores which was re-started in December 1911 was completed in October 1912. The result showed a net excess of Rs. 3,961-13-5 which was adjusted through the Stock Adjustment Account. The discrepancies were chiefly due to incorrect postings and errors in the issue of some of the articles, owing to bad grouping and to some of the Stores previously unbooked having been brought on the Ledgers. The result on the whole was satisfactory and the verification was justified. It should be repeated at regular intervals.

76. The surplus and obsolete Stores on hand at the end of the year showed a reduction over the last year's balance. This was satisfactory in view of the heavy works in progress, but, care must be taken to maintain the improvement that has been made. The slight increase in the value of Stores on lines was due to the verification by the Stores Department of the Stores in charge of the different Inspectors of the Water Works Department.

77. The Pipe Depôt at Bellasis Bridge is still in a dangerously unfenced condition but it is not worthwhile enclosing it, as the land will shortly have been given up for Railway purposes to Government to whom it belongs. This emphasizes the necessity for enlarging the Central Depôt at Delisle Road, which is desirable also for other reasons. The acquisition of the necessary land should therefore be expedited.

78. Mr. Hale who was in acting charge of the Stores Department was relieved on 1st May 1912 and Mr. A. G. Christiansen, M.S.E., A.M.I.M.E., was appointed Storekeeper with effect from that date. The departmental working has considerably improved, but care is still needed to see that the requirements of the different departments are quickly supplied and are, where possible,

foreseen. The Storekeeper must also give continued attention to the importance of keeping himself fully acquainted with the dealers in the various articles, so as to prevent a few firms monopolising the supply of Municipal requirements.

FIRE BRIGADE.

79. The Fire Brigade was maintained in a state of thorough efficiency throughout the year.

80. There were 174 calls to fires, of which 12 were false alarms. The number of fires, 162, was no less than 51 above the average of the previous ten years, and therefore represents a heavy year's work. As, however, no great fire occurred the highest amount of damage in a single case being Rs. 3,50,000, against the 20 lakhs of the Colaba Fire in the previous year, the estimated damage during 1912-13 was Rs. 15,20,093 against Rs. 23,04,703 in 1911-12, and was much below the average. Of the amount of damage Rs. 14,51,718 represented insured, and Rs. 68,375 uninsured property.

81. The plant during the year was increased by two petrol motor engines and one steam motor engine, in consequence of which the number of horse traction steam fire-engines was reduced by two. The Brigade is now very well equipped.

82. The new Fire Station at Elphinstone Bridge Road was completed and occupied during the year. The question of providing new stations in the Fort and at Dadar is still under consideration.

83. The work of erecting the 50 fire alarms sanctioned by the Corporation was commenced during the year. The working of this system will be watched with interest.

84. It is very satisfactory that, notwithstanding the short water-supply in the City, a sufficient quantity was always promptly available at fires. Good use was made by the Fire Brigade on several occasions of sea water.

85. The loss of lives at fires during the year was three. The emergency van attended on ten occasions at fallen buildings; ten persons lost their lives by the fall of the buildings and seven received slight injuries, the collapse of a chawl at Lal Bagh alone resulting in eight deaths and injury to five persons.

86. During the year Mr. W. Nicholls, Chief Officer of the Brigade, was finally invalided from service, and Mr. T. C. Greenop, his *locum tenens*, was confirmed in the appointment.

PUBLIC GARDENS.

87. The number of public gardens maintained during the year was the same as in the past year.

88. The number of visitors at the Victoria Gardens was 14,96,569 against 16,18,810 in the previous year. The decrease was partially due to the day on which an admission fee is charged being changed from alternate Wednesday to alternate Saturdays. The levy of the small fee on one day of the fortnight on a half holiday is however justifiable to allow families of a good class to be accompanied on that day by their male relatives who are on other days engaged in work. The large number of visitors to the City during the Royal visit in the previous year doubtless also accounted for the large attendance at the gardens. The work of renovating some of the lawns and of planting new trees and shrubs was satisfactorily continued notwithstanding the difficulty of securing *malis* and retaining them in service. The effect of the depleted supply of water to the City was also felt at the Gardens.

89. The improvement of the storm-water drainage arrangements of the Gardens was continued during the year but a good deal remains to be done. Some of the cages also require renewal and enlargement. The new conservatory underwent considerable improvement during the year, and now has a good show of plants.

90. The band performances at the Victoria Gardens and at the Esplanade Bandstand and at Chowpatty were well patronised by the public. Band performances at the Victoria Gardens were given every Saturday, an admission fee being charged on every alternate occasion. In all 18 performances with an admission fee were given during the year, the number of visitors on these 18 days being 26,659 and the admission fee realised Rs. 2,829-8-0, a considerable increase on the previous year. Thanks are due to the Bombay Electric Supply and Tramways Company for continuing to carry the bandsmen to the Victoria Gardens and Chowpatty on band days in reserved cars free of charge.

91. The elephant and camel rides continued to be popular.

92. There were not many notable additions to the animals in the Victoria Gardens while the mortality was considerable, largely owing to an outbreak of rinderpest. At the request of the Superintendent of Gardens, Major W. J. Liston, I.M.S., Director of the Bombay Bacteriological Laboratory, has prepared a prophylactic vaccine for preventing fowl cholera among the birds of the Gardens. A number of birds were inoculated with this serum and this measure has to some extent checked the spread of the disease. The animals were on the whole in very good condition.

93. Arrangements have been made to improve the space surrounding the Queen's Statue by converting it into turf beds and for improving the appearance of the Flora and Wellington Fountains, for which water is not available.

94. The Northbrook Garden and the Sir Cowasji Jehangir Garden at Mahim continued to be utilized as Health Camps.

VICTORIA AND ALBERT MUSEUM.

95. The Museum was open to the public during 313 days of the year. The total number of visitors was 822,577 against 824,590 during 1911-1912 giving a daily average attendance of 2,628 against a daily average of 2,635 for the previous year. This shows a slight falling off as compared with the previous year the higher figure for which, however, was due to the large influx of visitors to Bombay on account of the Royal Visit. As compared with normal years the figures for 1912-13 show an increase.

96. In the Department of Natural History Collection, considerable progress has been made in identifying the collection of shells. In the department of Archæology five photographs of the caves at Elephanta and a photograph of the cave at Nasik have been added to the collection of Bromide Prints of Rock cut caves of Western India. An interesting collection has been made of industrial figures showing the different stages in certain industries of this Presidency, *viz.*, pottery, wood carving, stone-laying, cloth dyeing, gold and silver thread embroidery, damascening, enamelling, goldsmiths and silversmiths work and coppersmiths work. The Curator is gradually making a collection of books, prints and maps connected with Bombay, which will form an "Old Bombay" room, and be of great interest and value. The thanks of the Corporation are again due to Mr. F. H. S. Stone, Chief Officer of the S. S. Arcadia, for the assistance he has given to the Museum during the year in arranging the collection, in addition to presenting several fossils and shells.

97. Thanks are also due to Mr. Cowasjee Dinshaw of Aden for presentation of specimens of dugongs, which have taken the place of those formerly exhibited.

98. Considerable progress was made with the work of labelling and cataloguing the exhibits during the year. The Curator is to be congratulated on the improved manner in which the exhibits are displayed, so as to be readily understood by the varied classes of persons who visit the Museum.

VI.—Public Health.

99. The total mortality for the year exclusive of still-born births was 38,954 against 34,961 for the previous year. This is the highest mortality recorded since 1906. The Health Officer's report shows, however, that the climatic and health conditions of the year were unfavourable, while the mortality returns were increased by the incidence of epidemics of small-pox and cholera which together were responsible for 2,769 deaths. The number of deaths recorded from plague during 1912 was 1,717 which was the lowest since the first outbreak of plague. Although there has been some recrudescence in the present plague season it may be hoped that the decline will be permanent. Tuberculosis was responsible for 2,794 deaths.

100. The number of births registered during the year was 21,518 being the highest hitherto recorded. On the whole the figures indicate that the difficult work of registration is showing improvement in the case of both births and deaths.

101. In the year under report 10,587 Hajis were vaccinated as against 15,140 in 1911. Although the result was spoiled in a good many cases by the ignorance of the Hajis, the vaccination of so large a number is a great advance.

102. A Special Malaria Department was organized during the year and as a result of its efforts 82 wells which had been found to be breeding places for mosquitoes were filled up and 472 were either covered hermetically or provided with mosquito proof wire gauze covers. The work of this department is still in its early stages, but it offers great opportunity for usefulness if it is assisted by the public.

103. The full details which the Health Officer has furnished in his report of the measures adopted to combat the epidemic of cholera and of the manner in which it appears to have been spread are of great interest. The Health Officer's report also contains an account of the efforts that are being made to check the spread of tuberculosis. This is a work of much difficulty and Dr. Turner is entitled to great credit for the manner in which he has organised the scheme of work, independently of and yet working with his own department. In the year under report 2 more dispensaries were added to the previously existing 10 Municipal Dispensaries and these have been freely availed of by the public. Municipal nurses and midwives attached to the registration districts were fully occupied in attending on confinements, verifying births, and in advising mothers on the care and rearing of infants. The Health Officer's report contains details of the general working of his department and is the record of a very trying year's work, in which much that was of great importance was accomplished.

LICENSES.

104. The total amount collected on account of License fees aggregated Rs. 1,09,896 against Rs. 1,00,486 collected during the preceding year showing an increase of Rs. 9,410. The number of licenses issued were 8,336 against 8,119 issued during the preceding year.

105. The large amount of fees realized owing to the spread of population and to the thorough administration of the department drew the attention of the Corporation to the fact that it was becoming a revenue earning department, which was not the object for which licenses were originally imposed. The

Corporation have, since the close of the year, approved of certain reductions which will be in force from 1st April 1914.

106. The revised Bye-laws in respect of Milch Cattle Stables as well as Horse and Bullock stables were still under the consideration of the Corporation during the year under report, but the supervision over them has been considerably stricter, and several insanitary stables were closed or improved during the year. Bakeries and Aerated water factories having been brought under the purview of Section 394 of the Municipal Act as amended by Bombay Act II of 1911, were licensed for the first time in 1912-13 a much needed step in the case of bakeries. The total number of prosecutions instituted during the year was 3,564 out of which fines amounting to Rs. 13,624-14-0 were inflicted in 794 cases. This sum represents much the largest sum yet imposed, and would have been greater but for the accidental omission of some words from Section 394 of the Municipal Act in Act II of 1911. The average fine per case was considerably higher and the inadequacy of fines previously inflicted, to prevent successful infringements of the provisions of the Act, has it is hoped, been recognised.

107. An extra Inspector was provided for E ward with very satisfactory results. The department was efficiently managed during the year.

MARKETS.

108. The total revenue from Markets and Slaughter Houses amounted to Rs. 5,81,035-5-2 against Rs. 5,45,836-5-9 in the previous year showing an increase of Rs. 35,198-15-5 derived from different sources as given below :—

Stall rents				Rs. 21,852	10 5
Slaughter fees, Butchers' license fees, &c.				,, 14,851	12 0
				Rs. 36,704	6 5
Less—					
Decrease in squatters' fees from Fish Markets and scale fees in the Crawford Market compound from Contractors, etc.	Rs.	425	0 0		
Decrease in squatters' fees collected departmentally	,,	226	5 0		
Decrease in revenue from other sources	,,	854	2 0		
				Rs. 1,505	7 0
				Rs. 35,198	15 5

109. The increase in the stall rents is chiefly due to the revision of rents in the Crawford and Erskine Road Markets. The number of stalls vacant is still large in the Colaba, Fort and Erskine Road Markets. The first named is little used, and pays scarcely anything to the Municipality. The Fort Market is in many respects unsatisfactory, but it is neither possible to abolish it, nor advisable to incur the cost of rebuilding. The Erskine Road Market suffers from the competition of squatters, as does the Bhuleshwar Market. Generally speaking, however, stalls in Markets are readily taken though there are always a good many beef and mutton stalls unlet. As the receipts in the previous year when there was keen competition at the auction sale, were unprecedently high the slight decrease in the squatters' fees, etc., during the year under report is not of importance. The increase of Rs. 14,851-12-0 in slaughter fees, etc., is due to the prevalence of scarcity and famine in some of the up-country districts which caused a fall in the price of animals. The number of bullocks, cows and calves slaughtered was 54,155 against 41,250 an increase of 12,905. The number of sheep and goats killed fell from 693,688 to 688,519. The amount realised from the sale of blood showed an increase of Rs. 1,600.

110. The percentage of horned cattle rejected on account of unfitness at Bandora was about 3·5 per cent. against 4 per cent. last year while that of sheep was about 2·6 against 2·4 in the previous year. 33 buffaloes were rejected.

111. The fines inflicted by the Presidency Magistrates amounted to Rs. 1,374-14-0 against Rs. 1,995-14-0 in the previous year and were mostly on account of meat improperly brought into Bombay. The quantity of such meat seized and destroyed was 6,726 lbs. against 28,696 lbs. in the previous year and 94,557 lbs. in 1910-11. The reduction is due to the continued supervision and the power given by the amended Section 412 of the Municipal Act to the Police, of arresting without warrant any person bringing contraband meat into the City and to the Police and Railway Servants of seizing such flesh. 170 convictions were obtained against 108 in the previous year. The increase in the number of convictions was due to persons bringing in meat in small quantities that is under 20 lbs. being prosecuted instead of being let off as in previous years after the meat was seized and destroyed. It is satisfactory that the measures adopted, and the slight change in the Act obtained have resulted in this trade, which was dangerous to the health of the town being checked. The total quantity of unwholesome food destroyed as unfit for human consumption was 254,757 lbs. against 134,441 lbs. in the previous year.

112. The beef supply was plentiful and cheap, but the supply of mutton was somewhat deficient during the monsoon on account of scarcity of animals. The fruit and vegetable supply was up to the usual standard. A private milk market was licensed for the first time during the year. This should be the beginning of bringing the sale of this article under the control which it requires. Proposals for the extension and improvement of the market are approaching the stage of being brought forward.

113. It will be necessary in the future to control more strictly both squatters and private markets and in some cases to substitute Municipal Markets for the latter. On the whole the Market Department was very successfully conducted throughout the year. It has given a good return to the Municipality while meeting the wants of the public without serious complaint.

VII.—Education.

114. The number of Municipal Schools and of pupils attending them showed an increase, though smaller than in the previous year, from 142 schools with 15,861 pupils to 160 schools with 16,746 pupils, although there was a slight decrease in the number of pupils attending the Gujarathi Schools.

Eighteen new schools were opened as under :—

8	Marathi.
5	Gujarathi.
5	Urdu.
18	

115. Three out of the 18 new schools opened were for the education of factory children who are charged no fee and are supplied with slates, pens and exercise books. These schools are experimental and can only be successful if the Mill operatives see the advantage of education for their children, and if the Mill Managers co-operate.

116. The expenditure rose from Rs. 3,38,263 to Rs. 3,78,088. The increase was principally due to the opening of new schools, the employment of additional teachers in old schools and provision of better quarters for some schools. The cost per pupil was Rs. 19·9 against Rs. 18·7 for the previous year

117. As Government have provided for the instruction of a maximum number of seventy-five students from Bombay in the Training Colleges for men and women in Poona and Ahmedabad it may be hoped that the proportion of trained teachers will in future be largely increased. As it is now open to Mahomedan candidates at the Vernacular Final Examination to be examined in Urdu and special provision has been made for Mahomedan students at the Ahmedabad Training College the want hitherto so apparent of trained teachers for Urdu Schools should be lessened in the near-future if the Mahomedans will take advantage of the facilities open to them.

118. In addition to the three new school buildings made over to the Schools Committee mention of which has been made in my last year's report, the work of constructing a fourth building, *viz.*, that at Ardeshir Dady Street, has been taken in hand. Negotiations for sites for more buildings are in progress. Improved hired accommodation was also obtained for 26 schools.

119. The number of aided schools increased from 126 with 13,621 pupils to 134 with 14,021 pupils. The total grant paid to aided schools was Rs. 45,167 against Rs. 40,674 in the previous year.

MUNICIPAL SERVANTS' ACT.

120. No circumstances arose in any department of the Municipality in which it was necessary to put into operation the provisions of the Municipal Servants' Act.

J. CRERAR,
Municipal Commissioner
for the City of Bombay.

CHIEF ACCOUNTANT'S REPORT.

FOR 1912-13.

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FINANCIAL.

REPORT of Mr. R. Peel, Acting Chief Accountant, for the financial year 1912-13, as forwarded with his No. 4002 of 31st July 1913.

I have the honour to offer the following remarks on the financial transactions of this Municipality for the year 1912-13.

2. The documents necessary for the preparation of my report were required to be submitted on the 15th of May 1913, but, were not furnished by Heads of Departments with sufficient celerity, and consequently the submission of my report was hampered.

GENERAL RESULTS.

Rate of taxation.

3. During the year the rates of taxation remained stationary.

Income.

The resulting income amounted to Rs. 1,27,41,590 against Rs. 1,21,36,888 (exclusive of Rs. 4,88,901 on account of interest on Sinking and other funds and Rs. 30,000 being the premia on the first instalment of 30 lakhs of the 55 lakhs loan) in the preceding year, showing an increase of Rs. 6,04,702, which will be found dealt with further on under "Income."

Expenditure.

The expenditure of the year aggregating Rs. 1,16,81,587 shows an advance on the previous year of Rs. 7,15,926 and is dealt with under "Revenue expenditure."

Net result.

The net result of the year's transactions is a surplus of Rs. 10,60,003 which is less than the previous year by Rs. 1,11,224.

Plague write-off.

Out of this surplus, Rs. 3,10,052 have been utilized also this year towards writing off a portion of the Plague Expenditure of Rs. 9,10,052 financed from Loan Funds. Last year Rs. 5,00,000 were utilized for the write-off and there is now a balance of Rs. 1,00,000 to be written off for which a provision has been made in the Revenue Budget for 1913-1914.

Budget Estimates—(1) Income.

4. The original Budget Estimates of Income stood at Rs. 1,20,00,500. This was increased to Rs. 1,23,45,500 in the Revised Estimates, but the figures actually realized were Rs. 1,27,41,590, showing an increase of Rs. 7,41,090 over the original estimates and of Rs. 3,96,090 over the Revised Estimates.

Budget Estimates—(2) Expenditure.

5. The expenditure for the year, *viz.*, Rs. 1,16,81,587 shows a decrease of Rs. 2,03,029 on the original Budget Estimates of Rs. 1,18,89,616. As compared with the finally amended estimate of Rs. 1,31,00,589 (excluding the amount of Rs. 1,10,053 provided in the original Budget Estimate and a further grant of Rs. 2,00,000 for the write-off of Plague expenditure outstanding) there remained an unexpended balance of Rs. 14,19,002, out of which renewals of grants to the extent of Rs. 10,17,956 are required to meet expenditure in 1913-1914 and future years, thus leaving a net saving of Rs. 4,01,046 on the final estimate for the year, after having already provided for a saving of Rs. 1,19,000 in the revised estimates of the year.

Opening and closing working balances.

6. Including recoverable advances to the extent of Rs. 4,62,300 for administrative purposes, and Rs. 8,96,295 reserved for the renewal of lapsed grants for 1911-12 and previous years, the year opened with a working cash balance of Rs. 38,69,352. It closed with a balance of Rs. 46,29,577, of which Rs. 10,17,956 represent the renewals of lapsed grants for 1912-1913 and previous years, and Rs. 1,00,000, the minimum cash balance required by law, and Rs. 9,25,000 reserved to meet the contribution due to the City Improvement Trust on the 1st May 1913.

Reserve Stores Stock.

7. The sum standing at the debit of "Reserve Stores Stock" at 31st March 1913, including Surplus and Obsolete Stores of the value of Rs. 26,868, aggregated Rs. 4,50,267, as compared with Rs. 4,60,542 (including Surplus and Obsolete Stores of the value of Rs. 35,423) at the beginning of the year. There was thus a further decrease of Rs. 10,275.

Additional and Lapsed grants.

8. The sums made available for expenditure during the year, in addition to the original Budget Grants, aggregated the very large figure of Rs. 13,29,973, of which Rs. 4,33,678 represented additional grants and Rs. 8,96,295 renewed grants. The grants requiring renewal in 1913-1914, aggregated Rs. 10,17,956 as compared with Rs. 8,96,295 renewed in 1912-1913.

9. Including all recoverable advances, except lapsed grants to be renewed in 1913-14, and Rs. 1,00,000 required to be reserved under the Act, the Surplus Cash Balance. Surplus Cash Balance at the close of the year aggregated Rs. 35,11,621 against Rs. 28,73,057 at the beginning of the year, bringing out an increase of Rs. 6,38,564. From this surplus, contribution amounting to Rs. 9,32,093-10-11 was paid to the City Improvement Trust on 1st May 1913. At the date of writing, the surplus had been further entrenched on to the extent of Rs. 1,88,165 during 1913-1914, and it continues to be temporarily entrenched on and was at this date hypothecated to the extent of Rs. 21,93,801 to provide sums for projects payable out of loan funds, in the absence of such funds having been specifically provided for in a loan.

10. The incidence of taxation per head based on the Census for 1911 during Incidence of taxation. each of the five years ending with 31st March 1913, works out as follows :—

Year.	Rs.	a.	p.
1908-09	8	14	9
1909-10	9	13	2
1910-11	10	11	0
1911-12	10	13	2
1912-13	11	8	5

11. The outstandings of rates and taxes at the close of the year 1912-13, stood at Income outstandings. Rs. 53,688 against Rs. 71,112 in the previous year, thus showing a decrease of Rs. 17,424 as follows :—

Outstandings at	General Tax.	Water Tax.	Halalcore Tax.	Wheel Tax.	Meter Hire.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
31st March 1912 ...	27,819	22,819	17,476	2,644	354	71,112
31st March 1913 ...	16,697	28,878	6,007	1,936	170	53,688
	11,122 Decrease	6,059 Increase	11,469 Decrease	708 Decrease	184 Decrease	17,424 Decrease

12. As compared with 1911-12, the receipts for the year show an increase of Comparison with 1911-12— (a) Income. Rs. 6,04,702. There was a falling off in the receipts from "General Tax" amounting to Rs. 24,457, in the "Miscellaneous fees," Rs. 59,185, in the "Contribution from Municipal servants towards Pension, &c., Fund", Rs. 13,160, and under "Payment by the City Improvement Trust of Credit Balance in General Account under Section 79 of Act IV of 1898," Rs. 1,60,364, but this was more than counterbalanced by increases in "Wheel Tax and Tolls," Rs. 54,035, in "Town Duties," Rs. 4,95,033, in "Halalkhore Tax," Rs. 58,135, in "Water Tax", Rs. 91,829, in Market Receipts", Rs. 35,465, in "Miscellaneous Receipts", Rs. 59,788, and in "Interest on Investments of surplus loan and other balances", Rs. 47,554.

13. The total Revenue Expenditure for the year, excluding the adjustment of Rs. 3,10,053 for the write-off of Plague Expenditure advanced from (b) Expenditure. Loan Funds shows a net increase of Rs. 7,15,926 over the previous year. The increase may chiefly be attributed to :—

Assesstment & Collection Department	Rs.	65,301
Fire Brigade	,,	1,45,319
Public Works	,,	1,00,703
Health Department	,,	1,56,722
Contribution to the C. I. Trust	,,	60,000
Debt	,,	70,036

There were also extraordinary items of expenditure such as Grain Compensation, Rs. 1,12,783, Contribution for the first year towards the expenses of King George V Antituberculosis league, Rs. 10,000, and Charges in connection with the illumination of the Municipal Office Buildings during the Royal Visit, Rs. 29,715.

14. The Municipal Debt at 31st March 1912, stood at Rs. 5,91,60,747. During the year Rs. 1,18,831 having been repaid, the balance payable at 31st Debt. March 1913, amounted to Rs. 5,90,41,916.

Sinking Fund.

15. Against the outstanding debt, the Sinking Fund Investments on the 31st March 1912, amounted to Rs. 1,15,36,138. To this were added during the year, Rs. 6,24,983 on account of Annual Sinking Fund Instalments and Rs. 4,78,762 on account of interest on the invested funds, bringing the total Sinking Fund Investments at 31st March 1913 to Rs. 1,26,39,883.

Borrowing Powers.

16. Allowing for the Sinking Fund of Rs. 1,26,39,883 against the outstanding debt of Rs. 5,90,41,916, the net debt liability is reduced to Rs. 4,64,02,033. Judged by the limit of double the rateable value (which stood at Rs. 5,19,46,646 on 1st April 1913), allowed under Section 109 (b) of the Municipal Act, the balance of our borrowing powers would amount to Rs. 4,48,51,376. A reference to para. 84 of this report will, however, show that taking the latest available data and allowing for the maximum rates of taxation leviable, our margin of borrowing powers is more correctly represented by Rs. 2,38,00,000.

Loan Works.

17. The original Budget Estimate was placed at Rs. 47,70,562. It was reduced at the time of the Revised Estimates and placed at Rs. 24,70,033, but the total expenditure incurred during the year amounted to only Rs. 17,87,921. Against the Budget Estimate of Rs. 39,72,120 and a Revised Estimate of Rs. 29,69,815, the actuals amounted during the previous year to Rs. 19,70,182.

Plague expenditure.

18. In this year the expenditure on Plague operations was, as in previous years, financed from Current Revenue, the amount expended during the year being Rs. 1,47,763 against the provision of Rs. 2,00,000 and an actual expenditure during 1911-1912, of Rs. 1,55,903. The total expenditure of this Municipality for Plague purposes from the commencement of Plague Operations in 1896-97 to the close of the year, aggregated Rs. 77,22,213.

INCOME.

Comparison between Budget Estimates and Actuals.

19. A detailed comparison between the Budget Estimates and the Actuals will be found in Appendix No. 2.

As in previous years, the Income exceeded the original Budget Estimates, the net excess in the year under review being Rs. 7,41,090 as under:—

Taxation Proper	Rs. 2,60,563
Services rendered	„ 1,55,782
Returns from Property and Miscellaneous	„ 3,24,745
	Rs. 7,41,090

20. The increase under "Taxation Proper" occurred under "General Tax" (Rs. 56,862), on account of revision in the assessments and construction of new buildings in the City, "Wheel Tax and Tolls" (Rs. 38,522), on account of increase in the number of victorias and labour carts plying for hire as well as owing to revision of tax on motors, "Town duties" (Rs. 1,32,131) on account of increase in receipts from the imports of sugar, and "Licenses" (Rs. 24, 678) on account of better control exercised by the License department on all licensable commodities and trades, which had hitherto escaped the taxation, as also owing to increase in the number of new licenses in respect of Factories, Grinding Mills, &c.

21. The Water Revenue was originally put at Rs. 20,51,000 and in the Revised Budget increased to Rs. 21,45,000 but the actuals amounted to Rs. 21,70,949 notwithstanding that the taxation was maintained at the same level as in the previous year, when the total revenue was Rs. 20,79,120. It will be seen that there is a steady increase in this source of revenue on account of larger consumption of water by hotels, mills and factories. As in previous years, the revenue from Meters was under-estimated to the extent of Rs. 1,00,000, but this was due to defective information in the Water Works Department, the procedure of which is undergoing reorganization.

The increase of Rs. 35,832 in receipts from "Halalkhore Tax" is due to construction of new buildings in the City and the revision of assessments.

22. The increase under "Returns from Property and Miscellaneous", which is very high is principally due to larger recoveries than anticipated from Markets on account of slaughter fees and stall rents, to heavy receipts from an unexpected sale of Municipal land to the Port Trust in connection with the extension of the Harbour Branch Railway at Mazagon and to profits accruing from Interest on Investments of Surplus Loan and other balances, as the actual

expenditure on "Loan Works" was lower than estimated. There is also an increase in "Miscellaneous Fines" but it has been counterbalanced by a decrease in "Miscellaneous Fees" on account of smaller receipts from the sale of the right of skinning dead animals.

23. It will thus be seen that in the net increase of Rs. 7,41,090 it was not possible for this office also this year to anticipate the unusual receipts from the following sources to the extent shown below:—

		Rs.
1.	Wheel Tax and Tolls	25,920
2.	Town Duties	1,30,000
3.	Licenses	20,000
4.	Water tax and Miscellaneous water works revenue...	1,00,000
5.	Market receipts	52,313
6.	Miscellaneous fines	19,121
7.	Miscellaneous receipts	1,08,584
8.	Interest on investments of surplus loan and other balances	1,35,834
	Rs.	5,91,772

Deducting this sum from the net increase of Rs. 7,41,090, it will be found that the under-estimate is reduced to Rs. 1,49,318 on a total estimate of Rs. 1,20,00,500, or a deviation of only 1·2 per cent.

II.—COMPARISON BETWEEN REVISED ESTIMATES AND ACTUALS.

24. From Appendix No. 2 it will be seen that in the revised estimates, the total income was advanced from the original estimates of Rs. 1,20,00,500 to Rs. 1,23,45,500, but the actuals exceeded even this sanguine estimate by Rs. 3,96,090, or a deviation of 3·2 per cent. The principal variations on the revised estimates are in the following cases and the causes contributing to them are almost the same as those mentioned in paras 20 to 22 :—

		Rs.
(1)	General Tax	39,862
(2)	Wheel Tax and Tolls	28,522
(3)	Town duties	1,32,131
(4)	Halalkhore tax	20,832
(5)	Water tax	25,949
(6)	Miscellaneous receipts	1,08,647
(7)	Interest on investments of Surplus Loan and other balances	31,584

III.—COMPARISON BETWEEN THE ACTUALS FOR 1911-12 and 1912-13.

25. The taxes were levied at the same rate as in the preceding year but the Income for the year (*vide* Appendix No. 2) exceeded that of the previous year by Rs. 6,04,702.

The variations were very marked, the increases under the different heads amounting to Rs. 8,67,103 and the decreases to Rs. 2,62,401.

The decreases are under "General Tax" (Rs. 24,457), Miscellaneous fees (Rs. 59,185), Contribution from Municipal servants towards Pension, &c., Fund (Rs. 13,161), and Payment by the C. I. Trust of credit balance in the General Account under Section 79 of Act IV of 1898 (Rs. 1,60,364), and they may be accounted for as follows :—

General Tax.—Last year, we had received a heavy amount of Rs. 1,58,773 on account of arrears of General Tax on the quinquennial revision of Government properties and this accordingly reduces the income under this head notwithstanding that there is an increase of Rs. 1,34,315.

Miscellaneous Fees.—The decrease is due to less receipts from the sale of right of skinning dead animals and the falling off in the fees for Gallery Projections, &c.

Contribution towards Pension, &c., Fund.—Last year, arrears of recoveries were made owing to the Corporation having allowed temporary service to count for pension and this accounts for the reduction in the income under this head.

Payment by the C. I. Trust of the Credit Balance in General Account.—Owing to the repeal of Section 79 of the Trust Act with retrospective effect, the income under this head has ceased. Practically every other source of income has expanded very materially and there is no retrograde movement visible anywhere. Receipts from "Taxation Proper," "Services rendered" and "Returns from Property and Miscellaneous", all contribute towards maintaining the expanding character of our revenues.

26. I attach, as usual, a statement showing as far as it is possible to show, without the adoption of the "Assets and Liabilities" system of accounts, the increase in our three staple sources of income, *viz.*, General Tax, Water Tax and Halalkhore Tax. After allowing for all principal factors of variations, the increase works out to Rs. 2,76,000, a most satisfactory result of the labours of the Assessment and Water Departments. In addition, I consider the following were permanent additions to our income :—

Wheel Tax	... Rs.	25,000
Licenses...	... ,,	9,000
Receipts from Tobacco duty	... ,,	4,000
Market Receipts	... ,,	30,000
Miscellaneous fines	... ,,	7,000
	Rs.	75,000
Add—		
General, Water, and Halalkhore Taxes ...	,,	2,76,000
	Rs.	3,51,000

27. The permanent expansion of our revenues during 1912-1913 may thus be put at Rs. 3,51,000.

1911-1912.	Amount.	Total.	Grand Total.	1912-1913.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
1. General Tax at 10½ per cent.—				1. General Tax at 10½ per cent.—			
Total collections booked	49,76,319 8 5			Total collections booked	49,51,862 1 1		
Less—				*Less*—			
Recoveries for previous years	1,73,687 14 7			Arrear recoveries	114 5 8		
	48,02,631 9 10				49,51,747 11 5		
Add—				*Add*—			
Outstandings for the year at the close of the year	25,281 9 1	48,27,913 2 11		Outstandings for the year at the close of the year	13,477 13 2	49,65,225 8 7	
2. Water Tax and Miscellaneous Water Works Revenue (3½ per cent. on the rateable value.)—				2. Water Tax and Miscellaneous Water Works Revenue at 3½ per cent. on rateable value.—			
Total collections booked	20,79,119 12 5			Total collections booked	21,70,949 1 1		
Less—				*Less*—			
Recoveries for previous years	22,578 1 2			Recoveries for previous years	11,979 7 2		
	20,56,541 11 3				21,58,969 9 11		
Add—				*Add*—			
Outstandings for the year at the close of the year	21,692 4 10	20,78,234 0 1		Outstandings for the year at the close of the year	26,873 5 5	21,85,842 15 2	
3. Halalkhore Tax—				3. Halalkhore Tax—			
Total collections booked	12,92,697 9 6			Total collections booked	13,50,832 8 3		
Less—				*Less*—			
Recoveries for previous years	9,035 3 1			Recoveries for previous years	6,231 7 7		
Add—	12,83,662 6 5			*Add*—	13,44,601 0 8		
Outstandings for the year at the close of the year	16,273 5 7	12,99,935 12 0		Outstandings for the year at the close of the year	4,648 12 10	13,49,249 13 6	
			82,06,082 15 0				85,00,318 5 3

Net Income from Property Taxes for 1912-1913	Rs.	85,00,318 5 3
Deduct—		
(1) Net Income from Property Taxes for 1911-12	Rs.	82,06,082 15 0
(2) Reduction in outstanding balances	„	18,247 4 3
	„	82,24,330 3 3
Net increase in 1912-13 over 1911-12	Rs.	2,75,988 2 0

OCTROI DUTIES.

28. As usual, the various articles on which duty was levied at the time of import under the provisions of Section 192 (1) of the Municipal Act, the amount levied, and the refunds allowed thereon under Section 192 (2) on their export, are shown in Appendix No. 3.

The gross collections for the year were estimated at Rs. 33,00,000, the refunds at Rs. 16,90,000 and the net revenue at Rs. 16,10,000. The actual gross realizations were Rs. 38,47,929 but the refunds paid aggregated Rs. 20,86,376 or Rs. 3,96,376 more than the estimate.

The net revenue collected and paid into the Municipal Treasury in the year amounted to Rs. 17,42,131 against Rs. 12,47,097 in the preceding year and was in excess of the estimate by Rs. 1,32,131. The net realizations, after deducting the cost of collection, amounted to Rs. 15,60,863 against Rs. 11,22,797 in the previous year.

29. I attach, as usual, Appendix No. 3-A showing the net revenue derived from each dutiable article during the 10 years ending with 1912-13, Appendix No. 3-B showing the actual collections, the refunds admitted, and the net revenue during the five years ending 1912-13, and also Appendix No. 3-C showing the gross collections for the year from each dutiable article month by month from each source with the total refunds admitted as compared with the figures for the preceding year.

30. It will be perceived that there were decreases under Grain, Ghee and Timber, but these were more than counterbalanced by a very heavy increase in Sugar.

REVENUE EXPENDITURE.

I.—Grants for Expenditure from Current Revenue.

31. From Appendix No. 4 it will be seen that the grants originally sanctioned by the Corporation, under Section 129 of the Municipal Act aggregated Rs. 1,18,89,616 (excluding the provision of Rs. 1,10,053 for the write-off of Plague expenditure). To this were subsequently added (1) Rs. 4,42,610 on account of lapsed grants for 1910-11 and previous years including transfers sanctioned in 1911-12 not utilized in that year and Budget grants for 1911-12, not wholly or partially utilized in that year and sanctioned by the Corporation in 1912-13, (2) Rs. 4,53,685 on account of lapsed grants for 1911-12, (3) Rs. 4,33,678 on account of additional grants sanctioned for purposes for which no specific grants existed. A special grant of Rs. 2,00,000 was also sanctioned for the write-off of a portion of the unadjusted Plague expenditure of Rs. 4,10,052 advanced from Loan Funds. Excluding this extraordinary item and the provision of Rs. 1,10,053 stated above and allowing for the saving of Rs. 1,19,000 taken credit for in the revised estimates, the total sanctioned grants for the year aggregated Rs. 1,31,00,589.

32. Appendix No. 4 shows the total additional grants sanctioned for the year at Rs. 6,33,678.

The principal items above Rs. 10,000 for which additional grants were voted are as under :—

		Rs.
(1)	Cost of laying a 9" stoneware pipe sewer at Saitan chowki near Khed Tank off Parbhadevi road	12,514
(2)	Cost in connection with the illumination of the Municipal Office Buildings, &c., during the Royal visit	29,800
(3)	Cost of purchasing 50 lengths of 100 feet Canvas hose for the use of the Fire Brigade department	14,000
(4)	Contribution towards the building to be erected at the Apollo Bunder to commemorate the visit of His Majesty the King-Emperor of India...	1,00,000
(5)	Grain compensation allowance to Municipal employés from 1st June 1912 to 28th February 1913	1,62,000
(6)	The write-off of Rs. 2 lakhs of Plague expenditure advanced from Loan Funds	2,00,000
(7)	Cost of purchasing 400 tons of Akonia	40,000
		Rs. 5,58,314

33. The transfers made from one Budget head to another without in any way affecting the total Budget provision for the year amounted to Rs. 2,35,648.

II. Comparison between the Grants as finally sanctioned and Actuals.

34. As stated in para. 31 the grants made finally available for expenditure during the year aggregated Rs. 1,31,00,589, a very material advance on the preceding year (Appendix No. 5). The total expenditure actually booked amounted to only Rs. 1,16,81,587, leaving the unprecedentedly high unexpended balance of Rs. 14,19,002. Rs. 10,17,956 are required to be renewed for expenditure in 1913-14, leaving a saving of Rs. 4,01,046 or 3·32 per cent. on the total sanctioned grants *minus* renewals, against 3·30 in the preceding year.

The following figures show the percentage of savings to sanctioned grants for the last five years, making no allowance for renewals :—

Year.	Final sanctioned grants after deducting savings taken credit for in the Revised Estimates.	Unappropriated net savings.	Percentage.
	Rs.	Rs.	
1908-1909 ...	1,15,21,022	1,78,558	1·55
1909-1910 ...	1,21,36,875	1,71,872	1·42
1910-1911 ...	1,21,74,691	2,31,642	1·90
1911-1912 ...	1,27,73,556	3,92,699	3·07
1912-1913 ...	1,31,00,589	4,01,046	3·06

35. This confirms the impression that Officers wilfully overstimate the allotments necessary to efficiently administer their departments and I am respectfully of opinion that they should be made to realize their responsibility in the matter, lest funds are allotted in excess to services which do not require them to the detriment of their own services where they might be usefully employed.

The following figures for the three years 1910-11, 1911-12, and 1912-13 will be found instructive :—

	1910-11.	1911-12.	1912-13.
	Rs.	Rs.	Rs.
Savings as estimated in the revised estimates ...	4,27,438	2,56,498	1,19,000
Further savings accrued in final accounts	2,31,642	3,92,699	4,01,046
Rs.	6,59,080	6,49,197	5,20,046

36. Taking both the savings estimated while preparing the revised estimates and those ascertained on the final accounts, the following are the principal departments and service heads involved, with the percentage of savings on total grants sanctioned :—

Percentage of savings.	Departments and Service heads.	Total Savings.
		Rs.
6·5	General Superintendence	24,404
3·6	Assessment and Collection	16,505
3·8	Fire Brigade	13,003
8·6	Public Works	2,40,173
2·7	Public Health Department	68,499
12·3	New Works	56,700
21·9	Plague Expenses	33,387
28·4	Grain compensation allowance	45,092
		Rs. 4,97,763

37. Taking the variations on the allotments arrived at even as late as December 1912, three months before the close of the year, the following savings accrued :—

		Rs.
A.	General Superintendence	24,404
B.	Assessment and Collection Department	12,016
C.	Fire Brigade	12,003
D.	Engineers' Department	1,87,306
E.	New Works	33,600
F.	Public Health Department	68,428
G.	Miscellaneous	54,001

The variation under A—General Superintendence, *viz*, Rs. 24,404 was due principally to two special items, *viz.* :—

(1) Rs. 20,560 appropriated by this office to savings after careful examination of all outstandings on account of law charges.

(2) Rs. 1,430 on account of less expenditure in connection with the Voters' list.

Under B—Assessment and Collection Department, Rs. 12,016 was chiefly due to certain vacancies in the Revenue and Refund Audit Office Establishment not having been filled up and also to the provision made for Ink for marking sugar bags not being fully utilized.

Under C—Fire Brigade, Rs. 12,003 was due to the grant sanctioned in 1911-1912 for Fire Alarm appliances being allowed to lapse, the provision having been budgetted for during 1913-1914 and also to favourable rates having been obtained in the purchase of Canvas Hose.

Under D—Public Works (Engineer's Department), Rs. 1,87,306, the principal items of savings were as under :—

	Rs.
Sanitary Disposal of Town sweepings	4,982
Drainage A—Miscellaneous Drainage	14,586
Water Works	64,584
B—Public Lighting	35,855
C—Road Watering	6,774
D—Roads and Footpaths	50,266

Out of the savings of Rs. 4,982, Rs. 3,643 were due (1) to decreased expenses under "Haulage charges" owing to only one kutchra train instead of two per day having been run throughout the year as the refuse was utilized for filling in the Clerk Road Reservoir and (2) Rs. 880 to the full strength of labourers not having been employed. The savings of Rs. 14,586 under "Drainage A-Miscellaneous Drainage" were due to less expenditure on "General Supervising Establishment," "Outdoor Staff," "Hire of Carts," and "Repairs and Alterations to Miscellaneous Drains and Gutters".

Of the saving of Rs. 64,584 under "Water Works," Rs. 5,048 were under Establishment, due to the full strength not having been engaged, Rs. 18,848 under "Repairing the Bhandarwada Reservoir" and "Vehar Filter beds," owing to the difficulty of obtaining sand of the requisite quality for filtration, Rs. 2,026 owing to less expenditure on Repairs and Paintings to Buildings in Bombay," and Rs. 6,180 provided for Repairing and Strengthening the Tansa Main Embankment, Rs. 5,963 for adjustment of minor water works financed from Loan Funds not being utilised and Rs. 19,337 under "Replacing small service mains in various parts of the City" being the result of an overestimate.

Of the saving of Rs. 35,855 under B-Public Lighting, Rs. 26,362 were due to the provision for the maintenance of 200 new lamps and 200 High-power lamps to be substituted for Ordinary lamps not having been fully utilised and Rs. 8,924 were under B. Contingencies on account of new lamps not having been put up to the extent estimated. Of the savings of Rs. 6,774 under C—Road Watering, Rs. 5,500 were under "Watering by hose, carts," &c., and the balance on renewals. Taking the savings of Rs. 5,000 in Road Watering in the Revised Estimates, the total savings amounted to Rs. 10,500 and this clearly emphasizes the necessity of curtailing the provision under this head in future. Out of the savings of Rs. 50,266 under D. Roads and Footpaths, Rs. 45,958 were under "Repairs and Maintenance of roads and footpaths." To this may be added the savings of Rs. 5,000 taken in the Revised Estimates and the transfer of Rs. 26,733 appropriated, with the result that the aggregate savings amount to Rs. 77,691. The actuals for the last three years also show that the estimates made out for Road Repairs are merely a reproduction of the old ones and do not correctly represent the requirements, thus proving the necessity of reducing the provision in future.

E.—New Works.—The saving of Rs. 33,600 under this head was due to overestimating.

F.—Public Health Department.—Of the saving of Rs. 68,428 in this Department, the principal items were :—

Rs. 31,614 in the Conservancy and Halalkhore branches.
Rs. 14,033 in Markets and Slaughter-Houses.
Rs. 7,560 in Malaria.

The saving under "Conservancy and Halalkhore" of Rs. 31,614 is due to the reduction in the number of halalkhores in consequence of the abolition of cesspools, absentees a mong the gully flushing staff and the bigaries and the full strength provided for the working of the kutchra motors not having been engaged owing to the non-arrival of motors and to savings in haulage charges and in water consumption in stables. The savings in Markets are due to the grant for the purchase of bullocks not having been fully spent, to the provision for hire of carts not having been utilized, and to less expenditure on repairs and painting to buildings. The savings in Malaria are due to the incumbent of the Special Officer's appointment not having been allowed to draw the full pay of the post and to the staff of sub-inspectors and bigaries required for stocking wells with fish not having been engaged and to less expenditure on Tools and Plant.

G. Miscellaneous.—The full provision on account of Grain Compensation and Local Allowance and Discretional Contingencies not having been required.

III. Lapsed Grants.

38. The unexpended balance of grants at the close of the year requiring renewal in 1913-1914, aggregate the very large figure of Rs. 10,17,956 against Rs. 8,96,295 of the last year or an increase of Rs. 1,21,661. The principal heads under which renewals are required (Appendix No. 5) with my estimate thereof at the time of preparing the *revised* estimate, are as follows :—

	Revised estimate.	Actuals.	Difference.
	Rs.	Rs.	Rs.
General Superintendence	36,000	35,636	— 364
Fire Brigade	500	6,577	+ 6,077
Public Gardens	10,300	34,948	+ 24,648
Public Works	1,42,977	2,59,872	+1,16,895
New Works	1,27,905	2,37,907	+1,10,002
Public Health	80,517	1,23,084	+ 42,567
Debt	1,75,000	1,94,016	+ 19,016
Contribution towards the expenses of the building to be erected at the Apollo Bunder to commemorate the visit of H. M. the King-Emperor of India	.....	1,00,000	1,00,000
	5,73,199	9,92,040	+4,18,841

The percentage of renewed grants (excluding the item of Rs. 1,00,000) to grants allotted shows an increase on the previous year, being 7 per cent., against 5·31 in 1911-1912, 5·43 in 1910-1911, and 4·67 in 1909-1910.

Making allowance for the last item of Rs. 1,00,000 sanctioned for the "Gate of India" the causes contributing to this large difference in the lapses must be sought only in the laxity on the part of officers in delaying the expenditure on works which must be completed within the year. The evil results of such lapses can only be avoided if in future all demands for new works and repairs to Municipal Buildings in charge of different departments are so cut down that the departments may be in a position to act up to their programmes.

IV.—Comparison between the Actual Expenditure during 1911-12 *and* 1912-13.

39. The Revenue expenditure of the year under report, as compared with the preceding year, shows increases aggregating Rs. 8,36,740 under certain heads and decreases aggregating Rs. 1,20,814 under others, thus leaving a net increase of Rs. 7,15,926. The principal variations are explained below :—

A. General Superintendence.—Increase of Rs. 20,903. Of this increase, Rs. 6,846 was under Corporation and Standing Committee's Establishment on account of allowances paid to

acting incumbents in the arrangement consequent on the Municipal Secretary's absence on leave and more expenditure on printing. Rs. 3,413 under Commissioner's Personal Office on account of expenditure on printing 500 copies of Municipal Bye-laws, purchase of 100 copies of the Modified Municipal Act and the advertisement charges in connection with new rules regarding the export of goods on which refund of Town Duties is allowed. Rs. 7,456 under General Office Establishment being the net increase as shewn below :—

	Increase.	Decrease.
	Rs.	Rs.
Establishment	996	.....
General election expenses	19,300	.....
Law charges	.....	5,195
Charges in connection with Electric light and lift.	1,142	.....
Rent of ground leased from Government for extension of the Municipal Office building ...	8,413	.....
Purchase of motors for Municipal Officers ...	.....	20,327
Up-keep of motors	3,279	.....

and Rs. 3,188 under Accounts and Expenditure Audit Establishment, due to allowances paid to the acting incumbent of the post of Chief Accountant and to increments allowed to certain members of the staff within the sanctioned limit.

B. Assessment and Collection Department.—The increase of Rs. 65,301 was principally due to more commission charges being required to be paid in consequence of heavy imports of sugar, to the employment of experimental staff in the Revenue and Refund Audit Office and to increments allowed to certain members of the Property and Wheel-Tax Establishment and to revision of the Peons' grade.

C. Fire Brigade.—The increase of Rs. 1,45,320 was mainly due to the purchase of Steam and Petrol motor fire engines, motor chassis and other fire appliances.

D. Public Gardens.—The net increase was Rs. 7,890. Of this Rs. 5,187 was under "Victoria Gardens", being due to enhanced wages allowed to malis and bigaries and the balance is under different gardens, which being small, calls for no remarks.

E. Public Works, Engineer's Department.—There was a net increase of Rs. 1,00,704 and the principal variations are explained below :—

The increase of Rs. 12,252 under General Supervision and Miscellaneous Duties was due to the Executive Engineer having been allowed to draw the first increment of his salary from 12th May 1912, to the filling up of the new appointment of Assistant Engineer for Buildings and Architecture and to the engagement of the staff for revising the list of Municipal properties.

The increase of Rs. 33,505 under C—Maintenance of Love Grove Pumping station was partly due to the employment of the staff and maintenance charges in respect of the new Pumping Station for a portion of the year and partly to more expenditure on repairs to machinery. The decrease of Rs. 9,028 under Sanitary—Disposal of Town Sweepings was due to less haulage charges.

The increase of Rs. 12,398 under Drainage was due to increased labour charges and expenditure on hire of carts and to increments allowed to certain members of the staff. The net increase of Rs. 33,386 under Water Works was due (1) to the revision of pay allowed to workmen, peons and lascars, (2) to the reorganization of the Inspectors' staff and the Waste Prevention Branch, (3) to increment allowed to the Hydraulic Engineer and certain members of the staff, (4) the execution of small works for the amelioration of water-supply and (5) to the adjustment of the cost of minor works financed from Loan funds. There was a decrease of Rs. 5,909, due to less expenditure on repairs to Bhandarwada Reservoir owing to the difficulty of obtaining sand of the requisite quality. There was a net increase of Rs. 17,244 in Streets & Buildings Branch. The variations are as under :—

	Increase.	Decrease.	
	Rs.	Rs.	
(*a*) Inspection and supervision ...	5,020	...	Due to amalgamation of house rent allowance with the pay allowed to lascars, messengers, peons, mukadums, chawkidars, increments allowed to the staff & increased conveyance allowance to D Ward Inspector, Road Branch.
(*b*) Public lighting...	5,658	...	Substituting high-power lamps for ordinary ones at conspicuous places & putting up new lamps in the Northern parts of the City.

	Increase.	Decrease.	
	Rs.	Rs.	
(c) Road watering...	6,312	...	Fixing new pattern hydrants and repairs and renewals of hydrants.
(1) Oiling & tarring the roads.	7,720	...	Larger area having been brought under the operations.
(d) Roads & footpaths	...	6,873	Owing to greater attention being paid to the operations during the year.
(e) Street Improvements	...	3,483	Less expenditure on the work of adding set-back lands to the roads.
(f) Miscellaneous	2,890	...	The cost of converting the steam tractor purchased for the market meat van service into a steam road-roller.

F. New Works.—There was a decrease of Rs. 34,364 owing to delay in the execution of works provided for during the year.

G. Public Health Department.—There were increases aggregating Rs. 1,59,872 and decreases amounting to Rs. 3,150, under this head, the net increase being Rs. 1,56,722. Explanations of the principal variations are subjoined :—

Conservancy Branch.—There was, under this head, an increase of Rs. 75,572 made up of many items, the main causes would be the actual rate of the feed of bullocks being much higher than that budgetted for, increased rate of coal and the cost and the maintenance of new motors purchased during the year.

Markets and Slaughter Houses.—There was an increase of Rs. 18,702 owing to the appointment of 2 new Veterinary Inspectors at Bandora for inspecting animals before slaughter, to the putting up of 4 Kitson lamps in the compound of Bandora Slaughter Houses for the improvement of lighting, to excess expenditure on keeping the lamps burning till late hours in different markets, and to a higher rate for fodder than that allowed last year.

Laboratory.—The increase of Rs. 4,443 was chiefly due (1) to the appointment of one additional attendant and peon, to increments allowed to certain members of the staff and (2) to increased expenditure on the purchase of medicines and apparatus.

Infectious Diseases.—The increase of Rs. 16,065 was due to special measures taken for the prevention and suppression of cholera and small-pox during the year.

Malaria.—There is an increase of Rs. 40,982 on account of more extensive operations than last year.

H. Census.—The increase of Rs. 6,685 was due to the Government claim for the moiety of charges for Census having been paid during this year.

I. Hospitals.—The decrease of Rs. 16,190 was due to the original system of paying a fixed contribution towards the Leper Asylum being changed to that of defraying the expenditure according to the number of lepers actually treated and the increase of Rs. 1,000 was due to the contribution payable to the Adams-Wylie Hospital having been enhanced from Rs. 3,000 to Rs. 4,000.

J. Miscellaneous.—The increases amounting to Rs. 1,67,543 were due to the grant of pensions to retired employés, to the payment of grain compensation to peons and other menial employés, to contribution for the first year towards the expenses of King George V Anti-tuberculosis league, to charges in connection with the illumination of Municipal Office Buildings during the Royal visit, to a write-off of a loss on account of deficiency in the stock at the Bellasis Bridge Pipe Depôt, and to the refund of a portion of the amount recovered for the right of collecting fees at the scale-shed at the Arthur Crawford Market. The decreases aggregating Rs. 26,701 were due to less expenditure under Discretional Contingencies, to the house rent allowance hitherto provided under this head being amalgamated with the salaries of the employés, and to the cost of preparing the address of Welcome to Their Imperial Majesties on the occasion of their visit to Bombay and that of providing a permanent flag staff on the Municipal Office Buildings having had to be paid last year.

K. Contribution to the City Improvement Trust.—An increased contribution of Rs. 60,000 had to be made to the City Improvement Trust during the year owing to the increased General Tax realizations.

L. Plague Expenses.—This head shows a decrease of Rs. 8,140, due to fewer patients having been treated in the Maratha Hospital.

M. Municipal Debt.—The increase amounting to Rs. 80,179 was due to the payment of interest for the whole year on the first instalment of 30 lakhs of the 55 lakhs loan and decreases aggregating Rs. 10,143 were principally due to less repayment of the Drainage Loan of 1878 on account of the debenture-holders not having surrendered the bonds within the year.

N. Write-off of the Plague Expenditure.—The decrease of Rs. 1,89,947 is due to reduced provision having been made this year for wiping off the outstanding balance of Rs. 4,10,052 in the Loan Funds Account.

40. Although as compared with the expenditure for last year, there have been increases in expenditure this year under "General Superintendence," "Assessment and Collection Department," and "Fire Brigade," they cannot be considered to be of a permanent nature as will be seen from the remarks made in the foregoing para. Similarly the large decrease of Rs. 34,363 under "New Works" is also of a temporary nature, as the works provided for in the Budget were not carried to completion within the year and consequently the grants had to be renewed for expenditure in the following year.

41. The following increases and decreases can, however, be characterized as of a permanent nature :—

	Increase.	Decrease.
	Rs.	Rs.
1. *Public Gardens*	5,000	...
2. *Public works*—		
Engr's Department—		
(1) General supervision and Miscellaneous duties ...	10,000	...
(2) Maintenance of Love Grove Pumping Station.	33,000	...
(3) Water Works	10,000*	...
(4) Streets and Buildings—		
A. Inspection and supervision... ...	4,000	...
B. Public Lighting ...	5,000	...
C. Oiling and tarring the roads ...	7,000	...
3. *Public Health Department*—		
(*a*) Increase in the maintenance of motors	33,000	...
(*b*) Decrease in halalkhore staff..	...	7,000
(*c*) Markets and Slaughter Houses	4,000	...
(*d*) Laboratory	3,000	...
(*e*) Hospitals	...	16,000
4. *Miscellaneous*—		
Pensions	10,000	...
5. *Contribution to the City Improvement Trust*	60,000	...
6. *Plague expenditure*	...	8,000
7. *Debt*	80,000.	...
	2,64,000	31,000
Net increase Rs. ...	2,33,000	

* The other increases, *viz.*, Rs. 24,000 on account of adjustment of minor works financed from Loan Funds as well as Rs. 4,400 for replacing small service mains in the City are left out of consideration as they are of a non-recurring character.

42. Having regard to the expansion in income of Rs. 3,51,000 brought out in para. 27, the permanent increase of Rs. 2,33,000 in expenditure compares favourably and if we continue to husband our resources as carefully as at present, we will be in a position to meet the heavy liabilities due to the raising of the loans without increasing the taxation.

SURPLUS CASH BALANCE.

Appendix No. 6.

43. The Surplus Cash Balance (excluding the minimum balance of Rs. 1,00,000 required by law but including Rs. 9,25,000 reserved for payment to the City Improvement Trust on account of contribution from Revenues ear-marked for the purpose during the year) stood at Rs. 35,11,620-3-11 against Rs. 28,73,056-14-6 at the close of 1911-12, showing an increase of Rs. 6,38,563-5-5 made up thus :—

	Rs.	a.	p.	Rs.	a.	p.
Surplus for the year				10,60,002	3	10
Decrease in balance of Reserve Stock stores... ...				10,274	10	9
				10,70,276	14	7
Less—						
Increase in balance of lapsed grants	1,21,661	1	10			
Portion of Plague expenditure written off by a contribution from Revenue	3,10,052	7	4			
				4,31,713	9	2
Net Increase Rs.				6,38,563	5	5

44. The Surplus Cash Balance at the close of the year, including Rs. 1,00,000 required by law and Rs. 9,25,000 reserved for the City Improvement Trust, amounted to Rs. 36,11,620-3-11. and was Rs. 20,70,545-3-11 in advance of the original estimate of Rs. 15,41,075 which however did not include Rs. 8,65,000 reserved for the City Improvement Trust. It also exceeded the balance shown in the Revised Estimates of Rs. 25,50,757-12-7 by Rs. 10,60,862-7-4 for the reasons accounted for below :—

		Rs.	a.	p.	Rs.	a.	p.
1.	Extra Income realizations (para. 4)				3,96,089	6	2
2.	Savings in expenditure (para. 5).				4,01,046	6	0
3.	Difference in favour of 1912-13 as compared with 1911-12, in the renewed grants actually required in 1911-12 and that provided in Revised Estimate for 1912-13, (Rs. 8,96,295-5-2—Rs. 5,82,000)				3,14,295	5	2
4.	Decrease in value of reserve stock				10,274	10	9
					11,21,705	12	1
Less—							
1.	Excess on amount reserved for additional grants	60,843	3	3			
2.	Increase shown in the opening balance of Revised Estimate ...	0	1	6			
					60,843	4	9
	Difference Rs. ...				10,60,862	7	4

45. To arrive at the real unhypothecated surplus cash balance at the close of the year, I will exclude Rs. 9,25,000, the contribution to the City Improvement Trust which has to be reserved and was paid on 1st May 1913 and Rs. 1,00,000 the balance required by law. We have thus a balance of Rs. 25,86,620, but at the date of writing, this has been entrenched upon to the extent of Rs. 1,88,164 by way of additional grants and Rs. 21,93,801 as an advance for the New Works, which however will be subsequently provided for out of Loan funds. It is satisfactory to have such a reserve to indent upon in an emergency and but for this, many important works might have been hung up pending negotiations with Government for a new loan.

LOANS RAISED.

Appendices Nos. 6-A and 6-B.

46. The amount of loans raised up to 31st March 1913, as shown in these Appendices, aggregated Rs. 5,57,00,500. The total amount expended on Loan Works and Plague stood at Rs. 5,35,19,974-1-2 and the invested balance at Rs. 21,80,525-14-10. Of the sum of Rs. 5,35,19,974-1-2, Rs. 5,16,12,702-5-5 represents expenditure on works for which loans have already been sanctioned and raised, and Rs. 19,07,271-11-9 is the total amount of Capital expenditure incurred by way of advances from Surplus Loan Balances, of which Rs. 1,00,000 is the balance of advance for Plague expenses awaiting adjustment and Rs. 18,07,271-11-9 represents outlay on works for which loans have yet to be raised. The amounts so advanced from the balances in hand of each individual loan are shown in Column 7 of Appendix No. 6-B in consonance with the wishes of the Corporation as expressed in their Resolution No. 6569 of 15th February 1912.

DEBT AND SINKING FUND.

Appendices Nos. 7, 7-A and 8.

47. The total Capital Debt of the Corporation at the beginning of the year amounted to Rs. 5,91,60,746-12-9, of which Rs. 22,89,246-12-9 represented the Vehar Debt due to Government and the balance was due to the public. The second instalment of Rs. 25,00,000 of the Rs. 55,00,000 loan for Miscellaneous works the raising of which was contemplated during the year under report, was postponed to 1913-1914 in view of the sufficient loan balances then available. The amount paid during the year towards the reduction of the Vehar Debt was Rs. 22,830-9-0 and Rs. 96,000 were repaid to certain holders of the debentures of the Drainage Loan of 1878. There was thus a decrease of Rs. 1,18,830-9-0 in the Capital Debt of the Corporation which stood at Rs. 5,90,41,916-3-9 on the 31st March 1913 against Rs. 5,91,60,746-12-9 at the beginning of 1912-1913. Of the total debt, Rs. 22,66,416-3-9 represented the amount due to Government. Against the total debt due, the Sinking Fund invested up to 31st March 1913 amounted to Rs. 1,26,39,883-5-9 leaving a net debt liability of Rs. 4,64,02,032-14-0. The total Sinking Fund includes an investment of Rs. 561 (met out of savings in the interest provision) being the difference between the amounts of various sinking funds as they should have theoretically stood on 31st March 1911 and those actually shown as such in Appendix 7-A of the Administration Report.

48. From Statement No. 7, it will be observed that 66 debentures of the aggregate value of Rs. 33,000 of the Drainage Loan of 1878, which were redeemable on 1st January 1906, 1st January 1909, 1st January 1910, 1st January 1912, and 1st January 1913, were not surrendered for repayment by the holders up to the close of the year. There was thus an increase of Rs. 15,500 in the outstanding balance at the close of the year.

49. Appendix No. 8 shows that the outstanding interest on the different Municipal Loans at the beginning of the year amounted to Rs. 1,53,748-3-1 which, together with Rs. 25,37,225 on account of interest payable during the year under report, gave a total liability of Rs. 26,90,973-3-1. Against this, the net interest paid by the Bank of Bombay during the year under report, amounted to Rs. 25,27,541-15-5 against Rs. 24,44,387-14-9 in the preceding year. The outstanding balance at the close of the year under report amounted to Rs. 1,63,406-2-1 against Rs. 1,53,748-3-1 for the preceding year. The outstanding represents 6·07 per cent. of the total interest payable against 5·92 in 1911-1912.

50. From Appendix No. 7-A, it will be seen that allowing for interest due but not collected, the invested balances of the Sinking Fund on 31st March 1913 amounted to Rs. 1,28,10,499-9-0 and was only Rs. 7,546-9-0 in excess of what should have accumulated for the purpose for which the funds have been created. The result will, I trust, be considered satisfactory.

51. The subjoined statement shows the book and market value of the paper held in the Sinking Fund at the close of the year. On the basis of the market rates our Sinking Funds are on a thoroughly sound financial basis:—

Name of Sinking Fund.	5 per cent. Municipal Debentures.	4 per cent. Municipal Debentures.	4 per cent. B. I. Trust Debentures.	3½ per cent. Government Paper.	3 per cent. Government Paper.
	Rs.	Rs.	Rs.	Rs.	Rs.
5 per cent. Municipal Loans Sinking Fund	34,66,000	5,65,500	5,97,500	16,99,000	.....
4 per cent. Municipal Loans Sinking Fund 3½ per cent. basis	.....	18,36,500	22,36,500	14,74,800	.....
4 per cent. Municipal Loans Sinking Fund 3 per cent. basis	.....	.....	.....	47,500	4,75,900
3½ per cent. Municipal Loans Sinking Fund	.....	24,000	30,000	1,98,300	.....
Face value	34,66,000 at 117	24,16,000 at 102½	28,64,000 at 103	34,19,600 at 96	4,75,900 at 82
Market value	40,55,220	24,76,400	29,49,920	32,82,816	3,90,238
Difference between face value and actual value	+ 5,89,220	+ 60,400	+ 85,920	—1,36,784	—85,662

EXPENDITURE ON LOAN WORKS.

Appendix No. 9.

52. The total outlay on Loan Works during the year (excluding Plague expenditure which was met from current revenue) aggregated Rs. 17,87,920-10-4 against Rs. 19,70,181-10-10 in the preceding year, showing a decrease of Rs. 1,82,261-0-6. The expenditure was distributed as under and as compared with the revised estimates, shows large variations:—

		Revised Estimates.			Expenditure.		
		Rs.	a.	p.	Rs.	a.	p.
A.	Buildings and Sanitary Structures ...	3,42,460	0	7	2,33,371	15	8
B.	Roads and Overbridges	9,99,354	1	1	6,77,487	12	1
C.	Drainage	6,47,505	14	0	5,17,362	13	11
D.	Water Works	4,35,021	6	8	3,39,051	13	4
E.	Cemeteries	42,753	9	1	17,450	9	0
F.	Disposal of Town Sweepings ...	1,853	13	0	1,853	13	0
G.	Miscellaneous	1,083	15	7	1,341	15	4
	Total Rs. ...	24,70,032	12	0	17,87,920	10	4

The principal works on which lapses occurred were:—

Construction of various overbridges in the City	Rs.	28,013
Construction of stables and chawls for bullocks and biggaries of the Health Department	,,	62,444
Construction of a Market at Chaupati	,,	20,000
Extension of Wari Bunder road	,,	1,40,468
Construction of a road from the B. B. & C. I. Ry. Matunga Station westward to Mahim	,,	84,424
Sewerage of the Elphinstone Reclamation District	,,	28,189
Distributing mains in the City in connection with the Tansa duplication and auxiliary works	,,	50,000
Measures for relieving the surcharging of sewers	,,	67,560
Total ...	Rs.	4,81,098

The original estimates for the year aggregated Rs. 47,70,562-7-2 against which, it will be seen, the actual expenditure was only Rs. 17,87,920-10-4. Our loan balance at the close of the year aggregated Rs. 21,80,525-14-10, and measures were taken to still further reduce the same to a figure nearer our estimated requirements by postponing the raising of the second instalment of 25 lakhs of the 55 lakhs loan in 1913-1914.

PLAGUE EXPENDITURE.

Appendix No. 9-A.

53. The charges booked on account of Plague operations during the year, as shown in Appendix No. 9-A, amounted to Rs. 1,47,763 against Rs. 1,55,903 in the preceding year, showing a decrease of Rs. 8,140.

54. The total expenditure incurred on Plague from the commencement of operations to the close of the year under report aggregates Rs. 77,22,213, and was financed as under :—

		Rs.
(1)	From the 20 lakhs Plague Loan	20,00,000
(2)	From the Government Contribution	14,50,000
(3)	Amount recovered from the City Improvement Trust under Section 79 (3) *b* (i) and (iii) of their Act and transferred to meet the liability incurred out of Loan Funds ...	16,00,000
(4)	Advance from Loan Funds	1,00,000
(5)	From Current Revenue	25,72,213
	Total Rs. ...	77,22,213

LIABILITIES AND ASSETS.

Appendix No. 10.

55. The gross liabilities of the Corporation were Rs. 6,19,76,025-12-8 at the beginning of the year, against Rs. 7,57,51,644-12-5 at its close, showing an increase of Rs. 1,37,75,618-15-9. This apparently large increase is due to the balances of different Sinking Funds as well as special funds hitherto appearing in the Income and Expenditure account having been transferred this year to a suspense account as in reality the transactions relating to the realizations and re-investments of the Sinking and Insurance Funds do not represent *bona fide* income and expenditure of the Municipality.

Assets.

		Rs.	a.	p.	Rs.	a.	p
A.	Cash and paper available for expenditure on Revenue and Capital projects—						
	(1) Cash Balance in Office and Bank Treasuries	4,51,938	5	7			
	(2) Surplus Funds Deposits	37,98,940	2	5			
	(3) Loan Funds	21,80,525	14	10			
					64,31,404	6	10
B.	Sinking Funds Investments				1,26,39,883	5	9
C.	Special Funds Investments...				9,09,385	4	5
D.	Advances recoverable, Paper Deposits and other items				18,38,410	15	4
E.	Reserve Stock				4,50,267	6	7
F.	Properties				6,77,05,896	4	2
G.	Debt due by the City Improvement Trust for lands transferred ...				17,15,289	5	11
	Rs.				9,16,90,537	1	0

56. The booked assets, it will be seen, exceeded the liabilities by Rs. 1,59,38,892-4-7, showing a decrease of Rs. 1,11,51,711-6-4 on the preceding year. Eliminating the amount of Rs. 1,35,34,726-6-4 from the Liabilities side for reasons assigned in para. 55, there is a net increase of Rs. 23,83,015 in the Assets over the preceding year, an explanation of which will be found under the head "Deposits," "Advances recoverable" and other "Debt" heads which are dealt with under "Suspense Accounts," paras. 72 to 81, where remarks on the reserve stock will also be found.

57. The revision of the valuation of our properties has been taken in hand since October 1912 and the work is in progress. The stores assets are also being placed on a satisfactory basis.

Investments and Invested Balances.

58. When the original Budget Estimates for 1912-13 were framed, a sum of Rs. 1,36,000 was estimated to be derived from interest on Investments of Surplus Loan and other balances. The actual realizations, however, amounted to Rs. 2,71,834 or Rs. 1,35,834 in excess of the original estimates, due to additions made to the Surplus Fund, in consequence of increased income realizations as explained in para. 4 and decreased expenditure in Revenue and on Loan Works as explained in paras. 5 and 17.

The income of Rs. 2,71,834 was derived from the following sources :—

(1)	On Current Account Deposits at 1, 2 and 2½ per cent.	Rs. 6,474
(2)	On Fixed Deposits	„ 1,70,687
(3)	On Investments in Government and other securities (including profit on sale of 3½ per cent. Government Paper)	„ 94,673
	Total ...	Rs. 2,71,834

59. Inclusive of investments on account of the Sinking, Insurance, Worn-out Mains Renewals and Net Premia Funds, the total sum of Investments and Re-investments arranged for by this Department during the year aggregated Rs. 1,93,77,000, thus—

(1)	Current Account Deposits	Rs. 20,75,000
(2)	Fixed Deposits	„ 1,58,00,000
(3)	Sinking and Special Funds	„ 15,02,000
		Total Rs. 1,93,77,000

60. The average rate of interest on fixed deposits was 4·1 per cent. against 4 per cent. in the preceding year. The rates realized for fixed deposits up to 6 months ranged from 2½ per cent. to 7 per cent. The maximum rate realized in the preceding year was 6 per cent.

61. It will be observed from Appendix No. 10 B that the invested balances at the close of the year stood at Rs. 1,98,82,534-11-5 or Rs. 2,69,150-12-5 less than the preceding year.

62. The Loan Fund balances were greatly reduced owing to the expenditure on loan projects and to the non-raising of any loan during the year. The increase in the Sinking Fund and Special Funds requires no explanation. The small difference in the two years is caused principally by the substantial rise in income and comparatively small expenditure during the year.

SPECIAL FUNDS.

Municipal Buildings Fire Insurance Fund.

63. The investment of the annual instalment of Rs. 10,000 plus the investment of accrued interest on invested balances, swelled the fund from Rs. 1,50,756-2-6 on 31st March 1912 to Rs. 1,67,011-9-2 at the close of the year, thus showing an increase of Rs. 16,255-6-8 which is normal.

WORN-OUT WATER MAINS RENEWAL FUND.

64. No special contribution was made to this fund from revenue sources during the year. After meeting the amount expended on renewal work this year, *viz.*, Rs. 25,931-12-10 the fund with the interest realized from invested balances decreased from Rs. 5,39,207-9-3, at the close of the past year to Rs. 5,36,515-3-1 at the close of the year under review.

NET PREMIA FUND.

65. The amount to the credit of this fund which stood at Rs. 1,44,916-2-10 at the beginning of the year swelled to Rs. 2,05,858-8-2 at the close of the year. The increase of Rs. 60,942-5-4 was due—

(1) To no expenditure having had to be incurred in connection with any new loan, the raising of the second instalment of the 25 lakhs of the 55 Lakhs Loan having been postponed to 1913-14.

(2) To the interest realized on the invested balances to the credit of the fund.

(3) To the sale of water-marked paper and

(4) To premium realizations on the investments of Sinking Fund instalments.

WATER WORKS ACCOUNT.

APPENDIX No. 11.

Income and Expenditure Account.

66. In the original Budget Estimates, the Water Works income was placed at Rs. 20,71,000 and the expenditure at Rs. 20, 68,839, providing for a surplus of Rs. 2,161, against which the actual income amounted to Rs. 21,79,791-6-11 showing an increase over the Budget Estimates of Rs. 1,08,791-6-11. The expenditure amounted to Rs. 19,61,376-1-4 or Rs. 1,07,462-14-8 less than the estimate. Adding to the estimated surplus of Rs. 2,161, the excess of Income amounting to Rs. 1,08,791-6-11 and savings in expenditure amounting to Rs. 1,07,462-14-8 we get a net surplus revenue of Rs. 2,18,415-5-7, as shown in Appendix No. 11.

67. As compared with the income for the preceding year (excluding the items of interest on investments) that for the year under report shows an increase of Rs. 90,537-9-4 while the expenditure shows an increase of Rs. 61,618-12-8.

68. The statement of Income realisations for the year under report as well as for the preceding five years from water supplied through meters, required by Corporation Resolution No. 6570 of 15th February 1912, will be found attached in Appendix No. 11.

ASSETS AND LIABILITIES.

Appendix No. 12.

69. The payment to Government of Rs. 22,830-9-0 towards the reduction of the Vehar Debt and of Rs. 41,388-4-4 towards the re-payment of the water works portion of the Drainage Loan of 1878, reduced the liabilities from Rs. 2,51,85,077-12-3 at the close of the preceding year to Rs. 2,51,20,858-14-11 but owing to the transfer of Sinking Fund Investments hitherto appearing as assets to a suspense account for the reasons explained in para. 55, the liabilities increased to Rs. 3,04,72,328-8-2 at the close of the year under report.

70. The assets aggregated Rs. 3,56,22,815-5-5 against Rs. 3,52,83,375-10-7 at the close of 1911-12 showing an increase of Rs. 3,39,439-10-10 which was made up of (1) Works executed out of different loans and savings on loans (*vide* Appendix No. 9), and (2) Additions to the Sinking Fund Investments.

71. From Appendix No. 12, it will be seen that the excess of assets over liabilities amounted to Rs. 51,50,486-13-3 or Rs. 49,47,811-1-1 less than the amount shown in the report for the preceding year owing to an increase of the liabilities as explained above.

SUSPENSE ACCOUNTS.

A.—Deposits.

72. The cash deposit outstandings at the close of the year aggregated Rs. 5,95,796-13-2 against Rs. 4,52,946-9-3 in the year 1911-1912, and were made up of—

		Rs.	a.	p.
(1)	Cash Deposits from Contractors ...	3,18,050	13	7
(2)	Cash Deposits received through Departmental Officers	82,880	4	0
(3)	Other Cash Deposits	1,31,114	3	7
(4)	Deposits on account of works performed for private parties	63,751	8	0
	Rs. ...	5,95,796	13	2

B.—INTER-DEPARTMENTAL CHARGES.

1. *Workshops.*

73. The opening balance was Rs. 11,263-2-1 or Rs. 1,652-7-11 less than in the preceding year.

The cost of labour and supervising staff employed, and of stores used on the works turned out in the shops during the year amounted to Rs. 1,99,885-0-2 against Rs. 1,84,028-2-7 in the previous year. The total outlay in the Workshops during the year, together with the opening balance, aggregated Rs. 2,11,148-2-3. The recoveries made during the year, including Rs. 73-2-0 realized by the sale of saw-dust and Rs. 4,169-6-5 realised by the sale of unserviceable stores amounted to Rs. 1,94,510-10-11 and the outstandings at the end of the year, including incomplete jobs and value of stores issued in March 1913, aggregated Rs. 19,373-6-1 which includes Rs. 3,600 for value of stores debited to Personal Account for want of a budget provision. The outstandings are made up of the following items :—

	Rs	a.	p.
Stores issued in March 1913 and charged in the accounts for March 1913 under the system of Stores Account	8,127	14	4
Outstanding bills	9,142	1	6
Incomplete jobs	2,103	6	3
Rs.	19,373	6	1

By charging 25 per cent. on all jobs the sum of Rs. 38,001-9-11 was obtained, adding to which (1) the sum of Rs. 4,242-8-5 realized by the sale of unserviceable stores and saw-dust, and (2) Rs. 1,125-13-3 realised by the hire of plant, &c., the gross earnings of the shops aggregated Rs. 43,369-15-7 from which the following Shop and Supervision, &c., charges amounting to Rs. 40,634-0-10 had to be met :—

	Rs.	a.	p.
1. Supervising Establishment	27,028	8	3
2. Shop charges	13,605	8	7
Rs.	40,634	0	10

The net profit of the Workshops was thus Rs. 2,735-14-9. This would have been increased to Rs. 4,235-14-9 had it not been for the cost of a steam fire engine taken over from the Fire Brigade Department for the use of the Workshops.

2. *Other Works.*

74. The outstanding balances on 31st March 1913 in respect of Departmental and Private Works executed by different branches of the Executive Engineer's Department, (excluding Workshops) and the Health Department are contrasted below with those on 31st March 1912 :—

	Balance on 31st March 1912.	Balance on 31st March 1913.	More.	Less.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
A.—Departmental Works.					
(1) Drainage Branch.	450 15 9	(a) 793 10 10	342 11 1	.....	(a) Out of this, Rs. 307-0-7 represents the value of stores issued in March 1913 and included in the accounts for 1912-13.
(2) Roads and Buildings Branch.	3,739 12 2	(b) 4,438 14 3	709 2 1	.....	(b) Out of this, Rs. 835-2-11 represents the value of stores issued in March 1913 and included in the accounts for 1912-13.
(3) Water Works Branch.	2,565 6 4	(c) 4,157 15 5	1,592 9 1	.....	(c) Out of this, Rs. 3,087-4-5 represents the value of stores issued in March 1913 and included in the accounts for 1912-13.
Rs. ...	6,746 2 3	9,390 8 6	2,644 6 3	.....	

	Balance on 31st March 1912.	Balance on 31st March 1913.	More.	Less.	REMARKS.
B—PRIVATE WORKS.					
Drainage Branch.					
On account of Ordinary Works.	1,912 14 7	(*d*) 1,307 7 8	.....	605 6 11	(*d*) Out of this, Rs. 131-12-0 represents the value of stores issued in March 1913, and included in the accounts for 1912-13.
Roads and Buildings Branch.	4,829 6 2	(*e*) 23,468 11 2	18,639 5 0	.....	(*e*) Out of this, Rs. 60-3-0 represents the value of Stores issued in March 1913, and included in the accounts for 1912-13.
Water Works Branch.	2,018 11 8	(*f*) 1,270 6 10	.....	748 4 10	(*f*) Out of this, Rs. 245-4-10 represents the value of stores issued in March 1913, and included in the accounts for 1912-13.
Health Department (Removing Chokes).	12,624 12 9	(*g*) 11,886 0 0	.....	738 12 9	(*g*) The outstandings are for all years from 1904-05 to 1912-13.
Rs. ...	21,385 13 2	37,933 9 8	18,639 5 0	2,092 8 6	

The account shows an exceptionally large outstading in respect of Private Works, Roads & Buildings Branch, but this is due to bills for the levelling, metalling and draining of private streets, such as the Cumballa Hotel Lane, 3rd Phofalwady, Telwady lane, between Sleater & Tardeo Roads, &c, under Section 305 of the Municipal Act not having been preferred in consequence of the works remaining incomplete. As, however, the owners of premises abutting on these streets have already deposited the amount of expenses in connection therewith, there will be no difficulty in clearing off the outstandings as soon as the works are completed. With regard to outstandings in respect of Private Works, Health Department, an additional grant has been applied for to write off irrecoverable charges amounting to Rs. 9,034-5-6 and a further grant may be necessary to write off the amount defalcated by the late Head Clerk, C. Ward, if the amount is irrecoverable from the Indian Guarantee & Suretyship Association.

Advances to Municipal Officers.

75. The outstandings on 31st March 1913 aggregated Rs. 31,113-7-4 against Rs. 46,955-12-5 on 31st March 1912. Of this, Rs. 10,863-2-1 were adjusted during 1913-1914 on the Budget provision becoming available, and of the balance Rs. 5,975 represents the sums allotted to the different Heads of Departments as standing advance for Contingent expenses, Rs. 3,000 is the sum advanced to meet the cost of suits filed by Narma Bros. in connection with the acquisition of land at Elphinstone Road Overbridge, Rs. 2,080 for payment to the B. B. & C. I. Ry. for the construction of Kutchra wagons and the remaining amount is comprised of small items which call for no remarks.

Advances to Contractors.

76. The outstandings at the close of the year amounted to Rs. 26,426-13-8 against Rs. 515-8-8 during 1911-1912. Of this Rs. 22,070-5-6 have already been recovered during 1913-1914.

Miscellaneous.

77. Out of the outstandings of Rs. 51,951-8-0 the following are the principal items :—

		Rs.	a.	p.
(1)	Acquisition of land beyond the regular line of the street to be adjusted against the sale-proceeds of land	16,672	6	7
(2)	Acquisition of land for the new Burning ground for Agris & Colis of the Sewri Section on behalf of Mr. Ismail Haji Casam ...	10,680	14	5
(3)	Remodelling house-gullies	7,346	0	11
(4)	Arbitration and other expenses in connection with the purchase of the Tramways	5,623	14	10
(5)	Expenditure in the suit filed by the Tramway Co. against the Municipality	4,410	5	7

The amount of item No. 1 will be adjusted when the land is sold. The recovery of the amount under item No. 2 is under dispute. The outstanding under item No. 3 is chiefly due to incomplete works, a portion of the amount, *viz.*, Rs. 1,428-10-2, has, however, been recovered during 1913-14. With regard to items (4) & (5) no progress has been made.

Advances from Surplus Cash Balance for new works to be subsequently provided for under a new loan to be raised.

78. Up to 31st March 1913, the grants sanctioned by the Corporation from Surplus Cash Balance as advances for new works on Capital Account, amounted to Rs. 16,59,130-5-10 and the actual expenditure to Rs. 12,60,838-6-9.

Personal Account of the Chief Auditor and Accountant, G. I. P. Railway.

79. The following is the list of works to be executed by the G. I. P. Railway on behalf of the Municipality for which advances aggregating Rs. 35,367 have been made from time to time since 25th February 1910 :—

		Rs.
(1)	Constructing a culvert at Currey road for removing and relaying 32" Vehar Main, South of Coorla	10,394
(2)	Constructing a culvert over Tansa Main at Arthur road ...	12,192
(3)	Carrying out alterations in the alignment of the East and West approaches to Clerk Road Overbridge	12,781
	Total Rs.	35,367

Personal Account of the Chief Auditor and Accountant, B. B. & C. I. Railway.

80. An amount of Rs. 675 was advanced for providing a temporary support to a gateway at Clerk Road level crossing.

Reserve Stock.

81. The receipts of General Stores during the year aggregated Rs. 5,84,960-11-8 and the issues Rs. 5,90,788-4-6. There was a further decrease of Rs. 5,827-8-10 in the balance of current stores. There was also a further reduction during the year in the balances of Surplus and Obsolete Stores from Rs. 35,422-14-7 to Rs. 26,868-6-9 and when the Surplus and Obsolete stores of the Drainage Department are disposed of by an auction sale as sanctioned under Corporation Resolution No. 4784 of 18th November 1912, the balance will be still further reduced by Rs. 22,805-13-0, a result which could not have been attained without rigid audit control.

The result of the verification of stock undertaken by independent verifiers in 1911-1912, could not be placed before the Corporation till 3rd February 1913, and as it was thought advisable that some time should elapse before a fresh verification was made, the stock was not verified by an outsider during the year under report but is being undertaken earlier in the ensuing year. The balances of the general, *i.e.*, current serviceable stores, are compared below for the last 5 years :—

	Rs.	a.	p.
Balance at the close of 1908-09	4,89,688	4	1
Balance at the close of 1909-10	4,89,841	0	8
Balance at the close of 1910-11	3,46,008	14	6
Balance at the close of 1911-12	3,07,380	9	6
Balance at the close of 1912-13	3,01,553	0	8

It is a matter of great satisfaction that the balance of current general stores so closely approaches the sum of Rs. 3,00,000 the maximum limit considered as being necessary for efficient working.

It may be possible to still further reduce this balance, as, on an examination of some of the detailed balances, I find they are unduly heavy. A large number of Water Works fittings has been lying in the Stores unutilized for a long time past and the steps which are now being taken will, I trust, have the effect of preventing the unnecessary accumulation of such stores in future.

As stated in the last Administration Report, a test audit of the accounts of the Stores, Department was commenced in June and completed on 24th July 1912, and several defects were brought to the notice of the Commissioner and as a result, improvements have been effected in several directions.

The balance of Reserve Stock in hand at the close of the year as per the General Books of this Office amounted to Rs. 4,50,267-6-7 against Rs. 4,60,542-1-4 at the close of the preceding year, showing a decrease of Rs. 10,274-10-9 as detailed below :—

DEPARTMENTS.	1911-1912.			1912-1913.			More.	Less.
	Serviceable Stores.	Surplus and Obsolete Stores.	Total.	Serviceable Stores.	Surplus and Obsolete Stores.	Total.		
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. General Stores Department.	3,07,380 9 6	35,422 14 7	3,42,803 8 1	3,01,553 0 8	26,868 6 9	(a)3,28,421 7 5	.....	14,382 0 8
2. Water Works Imprest ...	2,086 0 10	.....	2,086 0 10	3,283 8 5	.....	(b) 3,283 8 5	1,197 7 7	.....
3. Executive Engineer's Department ...	.....	.....	.....	2,164 14 0	.....	2,164 14 0	2,164 14 0	.....
4. Line Suspense Account ...	1,15,652 8 5	.....	1,15,652 8 5	1,16,397 8 9	.....	(a)1,16,397 8 9	745 0 4	.....
5. Stock Adjustment Account..	.....	.....	.....	.....	.....	(c)	.....	.....
Total ...	4,25,119 2 9	35,422 14 7	4,60,542 1 4	4,23,398 15 10	26,868 6 9	4,50,267 6 7	4,107 5 11	14,382 0 8
							Less—Increase Rs.	4,107 5 11
							Net—Decrease Rs.	10,274 10 9

(a) The differences between these amounts and those shown by the Storekeeper are Rs. 2,583-2-8, and Rs. 65-4-0 which are due to documents from Departments not coming to hand, and to some minor adjustments which will be made in the accounts for 1913-14.

(b) Value of stores remaining unused on 31st March 1913 out of the temporary imprest allowed to the Water Engineer, pending issue of regular imprests to different Municipal Officers as laid down in the Stores manual.

(c) There was a credit balance of Rs. 5,839-6-5 on 31st March 1913. The original credit balance has been greatly enhanced. This was due to the fact that heavy valuable castings lying unaccounted for on the Water Works pipe line in the district outside Bombay have been brought on to the Stores Books by credit to the Stock Adjustment Account.

Street Improvements.

82. The amounts made available on account of acquisition of set-backs during the year were as under :—

	Rs.			
Budget provision from Revenue	1,00,000			
Renewed grant	2,255			
Amount received as concession money from owners of properties for works allowed to be executed within the set-back line	12,639			
		Rs.	1,14,894	0 0
Balance out of Rs. 4,00,000 advanced from Surplus Loan and other balances to be subsequently adjusted against a new loan to be raised		Rs.	1,112	15 0
Amount advanced from Surplus Cash balance to be subsequently adjusted against a new loan to be raised		Rs.	2,10,364	5 10
		Total Rs.	3,26,371	4 10

Against this sum, Rs. 3,25,623-9-1 were expended, leaving a balance of Rs. 747-11-9 which has been renewed for expenditure during 1913-1914.

The undischarged commitments, however, up to 30th June 1913, in regard to set-backs already acquired and sanctioned to be acquired amount to Rs. 15,52,670. Adding to this, the amount of Rs. 6,10,365, paid from advances in 1910-11, 1911-1912, and 1912-1913, the total uncovered liabilities amount to Rs. 21,63,035 for which a loan of Rs. 20 lakhs has been sanctioned to be raised.

Having regard to the great activity displayed in revising the regular lines of the streets in the City and the enormous increase in the value of land, it would seem necessary now to finance the growing cost of street improvements by increasing the Budget provision instead of raising loans from time to time. The consequent interest and sinking fund charges entailed from year to year on these loans which are an unnecessary burden, would be obviated and the result achieved by an increased Budget grant would be the same while the latter would not increase the liabilities of the Municipality as a loan would.

General Financial Position.

83. The financial position continues to be perfectly satisfactory. The revenue is in a healthy condition and has been able to meet all unexpected demands on it without inconvenience. A rapid rise in rateable value in view of the great extent to which building operations are being carried on in the City and of new harbour and railway work can be confidently anticipated. The balance against which the borrowing powers of the Municipality can be exercised, provides perfect safety of all loans which may require to be raised in the near future. There is a steady growth of expenditure but this must be expected, as a liberal policy is necessary for the development of the City provided we move at a pace commensurate with our rateable wealth. I know of no burdens the acceptance of which we cannot look forward to with confidence.

84. Taking the latest data available at this date the income at the existing rates of taxation (excluding "Water," and "Fire service") may be placed at Rs. 1,15,30,000, as shown under, after eliminating all extraordinary and non-recurring items of receipts and the item of interest on investments of sinking funds and special funds which had hitherto been treated as income. There will be decrease in General Tax in 1913-1914 on account of the reduction of $\frac{5}{8}$ per cent. sanctioned by the Corporation, but this will be counterbalanced by increased revenue from Mills and from general enhancement of the rateable value of properties.

	Rs.	Rs.
"Taxation Proper" (excluding Fire tax) receipts in 1912-1913		75,33,535
"Services rendered" excluding "Water Tax" ...	13,50,832	
Add—		
Further expansion as known to date	35,000	
Total "Services rendered" excluding "Water Tax" ...		13,85,832
Carried over Rs. ...		89,19,367

	Rs.	Rs.
Brought forward ...		89,19,367
" Returns from Property and Miscellaneous" exclusive of Interest on Sinking and other funds.	14,53,245	
Deduct—		
(1) Receipts on account of sale of land... Rs. 45,000		
(2) Extraordinary receipts from City Improvement Trust ... ... ,, 37,431		
	82,431	
		13,70,814
		1,02,90,181
Add—		
Difference between General Tax at 9½ per cent. and the maximum rate of 12 per cent. leviable under the Act		12,41,800
	Rs.	1,15,31,981

or say, Rs. 1,15,30,000

The recurring normal revenue expenditure including debt and contribution to the City Improvement Trust but excluding investments of interest on sinking and other funds may be taken at ... ... Rs. 1,24,00,000

	Rs.		
Deduct—			
Fire Service	1,80,000		
Water Works (including debt)	21,42,000	Rs.	23,22,000
	Net expenditure,	Rs.	1,00,78,000

The income at the maximum rates of taxation being estimated at Rs. 1,15,30,000 there is a margin of Rs. 14,52,000 against which we can exercise our borrowing powers to the extent of Rs. 2,38,00,000. In addition we have an elastic water rate to draw upon for any expenditure on future water works and a margin of ¼ per cent. in the Fire Tax to meet additional requirements in that direction. I have full confidence in our revenues being able to meet the heavy recurring Debt expenditure looming in the near future in connection with Loans to be raised for Drainage and Sewerage schemes and the opening up of the North of the Island.

Test Audit.

85. Test Audit was continued throughout the year and 56 reports were made as under :—

Health Department	48
Road Department	6
Drainage Department	2
	56

The energy of the test audit staff was directed towards the Health Department, where great difficulty was experienced in making any headway owing to the persistency of the upper subordinate staff in contradicting the irregularities brought to light.

86. *Halalkhore work.*—The supervision over this work was found to be most lax and, as a personal test audit in conjunction with the Executive Health Officer revealed, full work was not taken from the halalkhores and instead of the prescribed 8 to 10 trips to be made by each halalkhore in the morning hardly 1 to 2 trips were made, very few persons making only 1 trip in the afternoon out of 3 to 5 trips fixed to be made. It was also found in one depôt that the Trip Marker had fraudulently marked up attendance and trips against members of the staff who had not put in an appearance and the assumption is that this practice prevails in other depôts. The Executive Health Officer is now alive to the mal-practices revealed by this office and has taken necessary action to put a stop to them. In the above state of affairs, if the cleansing of the City is satisfactorily effected it would be only reasonable to assume that there are more halalkhores than actually necessary. In order to ascertain this, the work of each halalkhore in

B Ward, North, was carefully scrutinized and it was found that out of 105 basketmen and women not less than 32 were required to be reduced. At the time when the halalkhore work in B Ward, North, was scrutinized, other wards reduced about 67 halalkhores which resulted in a saving of about Rs. 9,500 per annum. The expenditure on the halalkhore staff for the last four years stands as under :—

				Rs.
1909-1910	...	...	...	4,63,000
1910-1911	...	...	...	4,34,000
1911-1912	...	...	...	4,24,000
1912-1913	...	...	...	4,16,000

In the last annual report it was stated that the outlay in 1912-1913 would not be more than Rs. 4,18,000 while the actual expenditure was Rs. 4,16,000. In spite of this reduction, there is still an apparent wastage in almost all the wards of the City. Some of the wards have not made any reduction for a number of years past notwithstanding the fact that a large number of buildings were demolished on account of the operations of the Improvement Trust in their various schemes and that a large number of buildings on the basket system were converted into water-closets. B Ward, North, which was affected by the Improvement Trust schemes in Sandhurst Road and 1st and 2nd Naoroji Hill Roads and which had made no reduction for a number of years past, showed conclusively in the test audit scrutiny that the halalkhore staff was 30 per cent. in excess.

Scavengering.—The attendence of bigaries at the site of work was very slack. In some cases 33 to 47 per cent. of the menial staff were not at duty. The expenditure under scavengering labour showed a saving of Rs. 4,500 as against 1911-12, but it is assumed that there is still undue wastage as will be seen from the analysis of figures in each ward.

Mahaluxmi Dhobiwada.—It was pointed out in the last annual report that we were losing over Rs. 4,000 a year by an insufficient charge for service rendered. This has now been remedied by increasing the fee for each washing stone for clothes by Re. 1 and for each stone for washing yarn by Rs. 1-8-0 per mensem, *vide* S. C.'s resolution No. 3424 of 10th September 1912.

87. *Road Repairs.*—In the last report it was pointed out that the large increase in the grant for Road Repairs asked for by the Engineer's Department year after year was opposed by this office in the light of its test-audit experience. The results worked out during the year show once again that the opposition taken was not needless, for against the Budget grant of Rs. 5,36,000 the expenditure incurred was only Rs. 4,59,500, resulting in an unexpected balance of Rs. 76,500. The cost per 100 square feet of road full-metalled worked out during the year to Rs. 5-8-0 which was more than the rate worked out during 1911-12 by about Re. 1-1-0 but less than the rates of 1909-10 and 1910-11 by As. 6, pie 1, and As. 5, pies 7, respectively. The increase in the percentage of cost may be partly attributable to the increase of one anna per diem in the wages of labourers paid during the whole year and to some of the important roads having been provided with rubble-stone packing, but seeing that the rates for road metal, sand and sandstone were less than in 1911-1912 by As. 7, As. 3 and As. 5 respectively, the increase of Rs. 1-1-0 in the percentage of cost is not satisfactory.

88. *Road watering.*—Against the total grant of Rs. 84,000 the expenditure incurred was only Rs. 71,000, causing a saving of Rs. 13,000. The last two years' results point to the fact that a great deal more provision is made than is actually necessary and in future years it would be advisable to restrict the grant to a reasonable figure.

There is nothing in the test-audit of the Drainage Department which calls for any remarks.

89. The cost of the test-audit staff engaged in this office was only Rs. 4,100 for the year.

Fire Brigade.

90. The Fire Brigade tax realised during the year was Rs. 2,33,028-15-3 or Rs. 597-11-2 less than in the previous year. This decrease is merely in accounting as the last year's realizations included arrears of Fire Tax from Government on the quinquennial revision of their properties. The expenditure on the Fire Brigade Department, including the cost of two Petrol Motors and one Steam Fire Engine, Canvas Hose, &c., and Interest & Sinking Fund charges on the Fire Brigade Loan and on a portion of Rs. 55,00,000 Loan, was Rs. 3,20,025-15-9. This figure includes the charges in respect of the sum of Rs. 84,210-13-5 which had to be renewed in 1912-1913, to meet outstanding charges on account of Fire Brigade Motor Appliances, &c., which could not be supplied during 1911-1912, owing to strikes in England. There

was thus a deficit of Rs. 86,997-0-6 and the total surplus was reduced from Rs. 1,81,274-13-2 to Rs. 94,277-12-8. Deducting from the latter figure, the sum of Rs. 6,577-8-0 to be renewed in 1913-14 on account of charges incurred during 1912-13, but not paid before the close of the year, the net surplus to the credit of Fire-Tax stands at Rs. 87,700-4-8.

General.

91. The subjoined table show the volume of work dealt with in my Department during the year under review as compared with previous years :—

YEARS.	NATURE OF WORK.				
	Cash Payments to Employés.	Receipt Vouchers.	Debit Vouchers.	Inward Letters.	Outward Letters.
	Rs.	No.	No.	No.	No.
1897-98	19,93,311	22,217	53,907	20,362	6,117
1908-09	31,71,350	36,096	84,474	* 18,671	11,176
1909-10	33,75,526	36,691	81,790	* 19,642	12,296
1910-11	30,95,813	37,351	90,419	* 17,878	11,410
1911-12	31,56,091	37,325	85,514	* 16,695	10,718
1912-13	34,68,577	39,993	90,657	* 18,518	10,298
Percentage of increase in 1912-13 over 1897-98.	74·01	80·01	68·17	9·08 Decrease.	68·35

* Exclusive of bills, summaries, muster rolls, &c., which have been separately numbered.

I also subjoin a statement showing the cost of my Department in 1912-13 and 1897-98, and the percentage of cost to Income and Expenditure :—

YEAR.	Cost of Staff at maximum rate of pay.	Income.	Expenditure.	Percentage of Cost of Staff to Income.	Percentage of Cost of Staff to Expenditure.
	Rs.	Rs.	Rs.		
1897-98	62,754	(*a*) 67,08,566	(*b*) 69,96,969	·93	·89
1912-13	(*c*) 89,601	1,37,41,589	1,16,81,587	·76	·76
Increase	26,847 or 42·78 per cent.	60,33,023 or 89·93 per cent.	46,84,618 or 66·95 per cent.	.....	.....

The percentage of cost of staff to Income and Expenditure for the year 1911-12 was ·70 and ·77 respectively.

(*a*) Excluding a rebate of Rs. 4,37,055 to current revenue in respect of Plague expenses debited to Revenue in 1896-97.

(*b*) Excluding Rs. 5,00,000 on account of Plague expenses debited to Revenue in 1897-98 which were subsequently transferred to Loan Funds.

(*c*) Excluding cost of Stores establishment transferred to General Stores and including Rs. 1,449 on account of Plague staff employed in this department.

Personnel.

92. Mr. W. E. Waite, the permanent incumbent of the post of Chief Accountant, proceeded on one year's combined leave, *viz.*, 2 months' privilege leave and 10 months' furlough with effect from the 2nd September 1912. Mr. Maneckshah Cawashah Talyarkhan, Deputy Accountant, conducted the duties of the Chief Accountant in addition to his own without extra allowance from the date of Mr. Waite's departure up to the end of September but declined the acting appointment. I was asked to take the appointment for a period of one year and my services were obtained from the B. B. & C. I. Railway. I have accordingly been acting as

Chief Accountant since the 1st October 1912. None of the other officers of the department were on leave during the year. Mr. Manecksbah C. Talyarkhan continued to occupy the post of Deputy Accountant and was of the greatest assistance to me. His value to the department is already too well known and requires no further comment from me. Messrs. Meherji J. Antia and Harischandra Ramchandra, my First and Second Assistant Accountants respectively on probation, have, I consider, during my régime, discharged their duties with zeal and devotion and promise with more experience to be of the greatest use to the department.

On the whole I am very satisfied with the manner in which the staff generally have worked.

93. The following are the Appendices attached to my report :—

No. 1. Revenue Account.

No. 2. Statement of Income realized during 1912-13.

No. 3. Statement of Town Duties collected and Refunds allowed in 1912-13.

No. 3 (*a*). Statement of Net Town Duties collected from 1903-04 to 1912-13.

No. 3 (*b*). Statement of Gross Town Duties levied during the five years ending 31st March 1913, Refunds allowed and the Net Income realized during that period.

No. 3 (*c*). Statement showing Town Duty Collections from each source month by month with the refunds admitted for the year 1912-13, as contrasted with those for the year 1911-12.

No. 4. Statement showing the final sanctioned expenditure grants for 1912-13.

No. 5. Statement showing the expenditure for 1912-13 as compared with the final sanctioned grants and the actuals for the preceding year.

No. 6. Statement showing the Surplus Cash Balance on 31st March 1913.

No. 6 (*a*). Statement showing the amounts of loans raised, the expenditure incurred therefrom and the invested balances remaining on 31st March 1913.

No. 6 (*b*). Statement showing (1) the various Municipal Loans and their amounts, (2) the expenditure incurred against each of them, (3) the amounts withdrawn temporarily from their unutilized balances to meet the cost of new works, &c., and (4) invested balances of the Loans on 31st March 1913.

No. 7. Statement showing the outstanding loans due by the Municipality on 31st March 1913.

No. 7 (*a*). Statement showing the amount which should have accumulated in the Sinking Fund on the basis of the fixed instalments and the amount actually invested up to 31st March 1913.

No. 8. Statement showing the interest outstanding on different Municipal Loans on 31st March 1913.

No. 9. Statement showing works executed out of Loan Funds during 1912-13.

No. 9 (*a*). Statement showing expenditure on Plague Operations for 1912-13 contrasted with the figures for 1911-12.

No. 10. Statement of Assets and Liabilities on 31st March 1913.

No. 10 (*a*). Statement showing expenditure on different Loan Works upto 31st March 1913.

No. 10 (*b*). Statement showing the Invested Surplus Loan and Reserve Fund Balances on 31st March 1913 as compared with those on 31st March 1912.

No. 11. Water Works Income and Expenditure Account including Statement of Income realisations for 1912-13 and preceding 5 years from water supply through meters.

No. 12. Water Works Assets and Liabilities.

No. 13. Statement of total Receipts and Disbursements for the year ending 31st March 1913.

No. 14. Statement of Liabilities incurred on Street Improvements and the Rates and Amounts actually paid.

No. 15 & 15 (*a*). Statement of Income and Expenditure of the Bombay Municipality from 1865 to close of the financial year, 1912-13.

No. 16. Contrasted Statement of Income and Expenditure from the year 1865 to the Financial year, 1912-13.

I have the honour to be,
Sir,
Your most obedient servant,

R. PEEL,
Acting Chief Accountant.

Appendix No. I.

Revenue Account for 1912-1913.

Revenue.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Taxation Proper.			
1. General Tax	49,51,862 1 1		
2. Wheel Tax and Tolls	5,28,522 0 0		
3. Town Duties	17,42,130 15 4		
4. Licences	1,21,773 2 7		
5. Receipts from Government for Liquor Licences	1,43,750 0 0		
6. Receipts from Government for Tobacco Duty ...	2,83,525 12 0		
		77,66,563 15 0	
Services rendered.			
7. Halalkhore Tax	13,50,332 8 3		
8. Water Tax and other Miscellaneous Water Works Revenue	21,70,948 5 11		
		35,21,780 14 2	
Returns from Property and Miscellaneous.			
9. Market Receipts	5,80,269 13 2		
10. Public Gardens	12,283 10 2		
11. Tramway Rent	54,519 1 6		
12. Contribution from Municipal Servants towards Pension, &c., Fund	40,856 9 5		
13. Interest on Investments of Surplus Loan and other Balances...	2,71,334 4 9		
14. Interest at 3 per cent. on Corporation lands made over to C. I. Trust	37,431 3 10		
15. Miscellaneous (a)	4,56,049 14 2	14,58,244 9 0	
			1,27,41,589 6 2
		Total Rs. ...	1,27,41,589 6 2

Expenditure.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. General Superintendence	3,14,524 13 0		
2. Assessment and Collection and Revenue and Refund Audit Departments	4,40,505 11 9		
3. Fire Brigade	3,20,025 15 9		
4. Public Gardens—Maintenance and New Works.	33,981 12 5		
5. Public Works (Engineer's) Department... ...	23,70,496 14 7		
6. New Works	1,88,814 12 3		
7. Public Health Department	22,11,395 10 5		
8. General Stores	34,069 7 8		
9. Census	4,145 3 0		
10. Education	4,18,511 5 3		
11. Hospitals	4,46,160 0 0		
12. Pensions, Gratuities and Compassionate Allowances	96,913 7 7		
13. Contribution to the City Improvement Trust ...	2,25,000 0 0		
14. Plague Expenses	1,47,763 0 2		
		81,02,308 1 10	
15. Municipal Debt—			
Interest and Charges on Loans	26,07,789 1 4		
Reduction of debt and payment of Sinking Fund, ...	7,35,608 1 4		
		33,43,397 2 8	
16. Investments—			
Municipal Buildings Fire Insurance Fund ...		10,000 0 0	
17. Miscellaneous (b)		2,25,881 13 10	
			1,16,81,587 2 4
	Excess of Income over Expenditure ...		*10,60,002 3 10
		Total Rs. ...	1,27,41,589 6 2

	Rs. a. p.
(a) Miscellaneous Fines	31,120 14 11
Do. Receipts...	3,08,647 12 8
Do. Fees	93,196 6 8
Do. Savings	8,547 1 4
Profit on Municipal Workshops	2,735 14 9
Actual Profit on sale of Stores to Contractors, &c.	4,366 14 4
Sale-proceeds of unserviceable Tools and Plant, &c.	7,434 13 6
Total Rs.	4,56,049 14 2

	Rs. a. p.
(b) Discretional Contingencies	4,014 4 9
Auditors' Allowance	10,000 0 0
Local Allowance	55,692 12 4
Loss on account of irrecoverable bills written off	267 6 0
House Rent	Cr. 4 10 4
Cost of caskets and addresses presented to Lord Sydenham the retiring Governor and Lord Willingdon, the Governor Designate and other expenses in connection therewith	750 11 0
Constribution towards the expenses of King George V Anti-Tuberculosis League (1st instalment)	10,000 0 0
Charges in connection with the illumination of the Municipal Office Building during Royal Visit	29,714 10 1
Loss on account of the deficiency in the stock at the Bellasis Bridge Pipe Depôt written off	1,538 2 6
Refund of a portion of the amount recovered for the right of collecting fees at the scale shed at Arthur Crawford Market during 1911-1912	1,000 0 0
Grain Compensation	1,12,783 9 6
Compensation to a Victoria Driver in respect of his claim for damage caused to his carriage	125 0 0
Total Rs.	2,25,881 13 10

* This includes Rs. 3,10,052-7-4 transferred for writing off a portion of Plague Charges advanced from Loan Funds.

R. PEEL,
Acting Chief Accountant.

J. CREBAR,
Municipal Commissioner for the City of Bombay.

Appendix

IN

STATEMENT showing the Net Receipts during the Financial year 1912-13 from all sources as con-

PARTICULARS.	Actuals for 1911-12.	Budget Estimate for 1912-13.	Revised Estimate for 1912-13.	Actuals for 1912-13.
1	2	3	4	5
	Rs. a. p.	Rs.	Rs. a. p.	Rs. a. p.
Taxation Proper.				
General Tax at 10½ per cent. (including Government and Port Trust Contributions) ...	47,42,692 14 0	46,64,647	46,91,000 0 0	47,18,833 1 10
Additional at ½ per cent. for Fire Brigade charges	2,33,626 10 5	2,30,353	2,31,000 0 0	2,33,028 15 3
	49,76,319 8 5	48,95,000	49,12,000 0 0	49,51,862 1 1
Wheel Tax and Tolls	4,69,486 9 10	4,85,000	4,95,000 0 0	5,23,522 0 0
Town Duties	12,47,097 8 2	16,10,000	16,10,000 0 0	17,42,130 15 4
Licenses—				
(a) Dangerous and Offensive Trades ...	1,00,109 8 0	85,000	1,02,000 0 0	1,09,678 0 0
(b) Streets and Buildings	4,975 0 0	5,000	4,000 0 0	3,610 0 0
(c) Land Conveyance, &c., Licenses ...	8,692 4 3	7,000	8,500 0 0	8,485 2 7
Receipts from Government for Liquor Licenses.	1,43,750 0 0	1,44,000	1,43,750 0 0	1,43,750 0 0
Do. do. Tobacco Duty ...	2,78,896 1 8	2,75,000	2,75,000 0 0	2,83,525 12 0
	72,29,326 8 4	75,06,000	75,50,250 0 0	77,66,563 15 0
Services rendered.				
Halalkhore Tax	12,92,697 9 6	13,15,000	13,30,000 0 0	13,50,852 8 3
Water Tax and other Miscellaneous Water Works Revenue	20,79,119 12 5	20,51,000	21,45,000 0 0	21,70,928 5 11
	33,71,817 5 11	33,66,000	34,75,000 0 0	35,21,780 14 2
Returns from Property and Miscellaneous.				
Market Receipts	5,44,804 13 9	5,20,000	5,77,500 0 0	5,80,269 13 2
Public Gardens	12,661 3 5	10,000	11,500 0 0	12,283 10 2
Tramway Rent	54,542 14 1	55,000	55,000 0 0	54,519 1 6
Miscellaneous Fines	23,381 0 7	12,000	28,000 0 0	31,120 14 11
Do. Receipts	2,48,859 5 11	2,00,000	3,00,000 0 0	3,08,647 12 8
Do. Fees	1,52,231 5 5	1,10,000	1,10,000 0 0	93,196 6 8
Do. Savings	8,757 3 3	8,000	8,000 0 0	8,547 1 4
Contribution from Municipal Servants towards Pension, &c., Fund	54,017 5 3	36,500	41,000 0 0	40,856 9 5
Profit on Municipal Workshops	2,122 7 10	.....	.....	2,735 14 9
Actual Profit on sale of Stores to Contractors, &c.	7,518 1 7	2,000	6,000 0 0	4,366 14 4
Sale Proceeds of Unserviceable Tools and Plant, &c.	4,879 0 9	4,000	7,500 0 0	7,484 13 6
Interest on Investments of Surplus Loan and other Balances	2,24,279 12 8	1,36,000	2,40,250 0 0	2,71,834 4 9
Interest at 3 per cent. on Corporation lands made over to City Improvement Trust... ...	37,275 13 3	35,000	35,500 0 0	37,431 3 10
Payment by the City Improvement Trust of Credit Balance in General Account under Section 79 of Act IV of 1898	1,60,364 0 2	.....	.....	.....
	15,35,744 8 4	11,28,500	13,20,250 0 0	14,53,244 9 0
Total Rs. ...	(a) 1,21,36,888 6 7	1,20,00,500	1,23,45,500 0 0	1,27,41,589 6 2
				Less
				Net Increase Rs.

(a) Excludes Rs. 4,88,301-1-0 on account of interest realized on sinking and special funds, and Rs. 30,000 on account of premia received on the 1st Instalment of Rs. 30 lakhs of the 55 lakhs Loan.

R. PEEL,
Acting Chief Accountant.

No. 2.

› COME.

trasted with the Original Budget Estimate, the Revised Estimate and the Actuals for 1911-12.

As compared with the Original Estimate.		As compared with the Revised Estimate.		As compared with the Actuals for 1911-1912.	
More.	Less.	More.	Less.	More.	Less.
6	7	8	9	10	11
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
54,186 1 10	.....	37,833 1 10	.....	.....	23,859 12 2
2,675 15 3	.....	2,028 15 3	.....	.....	597 11 2
56,862 1 1	.....	39,862 1 1	.....	.....	24,457 7 4
38,522 0 0	.....	28,522 0 0	.....	54,085 6 2	.....
1,32,130 15 4	.....	1,32,130 15 4	.....	4,95,033 7 2	.....
24,678 0 0	.....	7,678 0 0	.....	9,568 8 0	.....
.....	1,390 0 0	.....	390 0 0	.....	1,365 0 0
1,486 2 7	.....	.....	14 13 5	.....	207 1 8
.....	250 0 0	.....	.....	.....	.....
8,525 12 0	.....	8,525 12 0	.....	4,629 10 4	.....
2,62,303 15 0	1,640 0 0	2,16,718 12 5	404 13 5	5,63,266 15 8	26,029 9 0
35,832 8 3	.....	20,832 8 3	.....	58,134 14 9	.....
1,19,948 5 11	.....	25,948 5 11	.....	91,828 9 6	.....
1,55,780 14 2	.....	46,780 14 2	.....	1,49,963 8 3	.....
60,269 13 2	.....	2,769 13 2	.....	35,464 15 5	.....
2,288 10 2	.....	783 10 2	.....	.....	277 9 3
.....	480 14 6	.....	480 14 6	.....	23 12 7
19,120 14 11	.....	3,120 14 11	.....	7,739 14 4	.....
1,08,647 12 8	.....	1,08,647 12 8	.....	59,788 6 9	.....
.....	16,803 9 4	.....	16,803 9 4	.....	59,184 14 9
547 1 4	.....	547 1 4	.....	.....	210 1 11
4,356 9 5	.....	.....	143 6 7	.....	13,160 12 3
2,735 14 9	.....	2,735 14 9	.....	613 6 11	.....
2,366 14 4	.....	.....	1,633 1 8	.....	3,151 3 3
3,434 13 6	.....	.....	65 2 6	2,555 12 9	.....
1,35,834 4 9	.....	31,584 4 9	.....	47,554 8 1	.....
2,431 3 10	.....	1,931 3 10	.....	155 6 7	.....
.....	.....	.....	.....	.....	1,60,364 0 2
3,42,029 0 10	17,284 7 10	1,52,120 11 7	19,126 2 7	1,53,872 6 10	2,36,372 6 2
7,60,013 14 0	18,924 7 10	4,15,620 6 2	19,531 0 0	8,67,102 14 9	2,62,401 15 2
18,924 7 10		19,531 0 0		2,62,401 15 2	
7,41,089 6 2		3,96,089 6 2		6,04,700 15 7	

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing the quantity and value of several articles upon which Town Duty was

DUTY COLLECTED BY	GRAIN AND PULSE AT 6 ANNAS PER CANDY.			FLOUR OF ALL SORTS AT 75 PER CENT. OF THE RATE AT THE TIME BEING LEVIED ON THE GRAIN FROM WHICH FLOUR IS PREPARED.			WINES AND SPIRITS AT 4 ANNAS PER GALLON.			BEER AT 6 PIES PER GALLON.		
	Candies.	Furrus.	Amount of Duty.	Candies.	Furrus.	Amount of Duty.	Gallons.	Pints.	Amount of Duty.	Gallons.	Pints.	Amount of Duty.
BOMBAY PORT TRUST.			Rs. a. p.			Rs. a. p.			Rs. a. p.			Rs. a. p.
April 1912	35,404	5	13,276 11 9	....	..	.....	1,16,171	7	29,042 15 8	2,15,523	..	6,735 1 6
May .. .. .. ,,	41,295	5	15,459 9 9	....	..	.....	93,283	6	23,320 15 0	74,517	4	2,328 10 9
June .. .. .. ,,	24,794	4	9,297 15 3	....	..	.....	65,413	..	16,353 4 1	45,786	..	1,430 13 0
July .. .. .. ,,	17,606	..	6,602 4 3	....	..	.....	67,115	6	16,778 15 2	82,205	...	2,568 14 6
August .. .. .. ,,	7,403	5	2,776 13 6	....	..	.....	66,204	1	16,551 0 4	32,904	4	1,028 4 3
September .. .. .. ,,	8,961	..	3,360 5 9	....	..	....	79,892	..	19,973 0 2	1,16,228	4	3,600 14 3
October .. .. .. ,,	28,607	3	10,727 12 6	....	..	.....	94,508	1	23,627 0 8	55,743	4	1,741 15 9
November .. .. .. ,,	63,287	7	23,732 15 6	13	4	3 13 0	88,624	3	22,156 1 7	1,31,910	4	4,122 3 3
December .. .. .. ,,	46,945	..	17,604 6 0	....	..	.....	87,804	5	21,951 2 5	1,04,622	..	3,269 7 0
January 1913	41,093	7	15,410 8 0	....	..	.....	1,10,316	1	27 579 0 4	1,37,297	3	4,290 8 8
February .. .. ,,	44,472	7	16,677 5 3	....	..	.....	93,212	3	23,303 1 5	71,091	..	2,221 9 6
March .. .. .. ,,	1,10,481	1	41,430 7 0	....	..	.....	90,427	4	22,606 14 0	91,552	..	2,861 0 0
Total ..	4,70,348	4	1,76,378 13 5	13	4	3 13 0	10,52,978	5	2,63,243 6 10	11,58,380	7	36,199 8 5
G. I. P. RAILWAY.												
April 1912	1,58,882	5	59,393 8 0	7	1	2 0 0	28	4	7 2 0	1,298	..	40 9 0
May .. .. .. ,,	2,20,980	1	82,867 9 0	....	..	.....	28	..	7 0 0	1,564	..	48 14 0
June .. .. .. ,,	1,58,699	1	59,512 3 0	1	1	0 5 0	74	..	18 8 0	1,072	..	33 8 0
July .. .. .. ,,	1,47,283	2	55,231 3 9	....	2	0 1 0	72	..	18 0 0	420	..	13 2 0
August .. .. .. ,,	1,49,197	3	55,974 9 0	1	2	0 5 0	37	..	9 4 0	1,140	..	35 10 6
September .. .. ,,	1,34,076	5	50,278 12 0	204	..	57 6 0	136	..	34 0 0	1,952	..	61 0 0
October .. .. .. ,,	1,10,482	2	41,430 13 6	5	1	1 7 0	22	..	5 8 0	1,512	..	47 4 0
November .. .. .. ,,	1,22,753	..	46,032 6 0	....	..	.....	195	..	48 12 0	822	..	25 11 0
December .. .. .. ,,	1,38,980	1	50,943 13 0	....	..	.....	289	..	66 0 0	1,228	..	38 1 0
January 1913	1,29,128	5	48,427 0 0	4	7	1 9 0	58	..	14 12 0	480	..	15 0 0
February .. .. ,,	1,02,797	1	38,548 15 0	....	..	.....	12	..	3 0 0	576	..	18 0 0
March .. .. .. ,,	1,22,775	1	46,040 11 0	1	1	0 5 0	27	..	6 12 0	820	..	25 10 0
Total ..	16,91,415	3	6,34,280 14 3	224	7	63 3 0	950	4	237 10 0	12,894	..	402 15 0
B. B. & C. I. RY. CO.												
April 1912	43,102	7	16,163 9 0	146	5	41 4 0	26	..	6 8 0	....	..	.....
May .. .. .. ,,	1,17,363	7	43,881 7 0	235	1	66 2 0	....	..	.....	....	..	.....
June .. .. .. ,,	86,757	5	32,534 2 0	530	2	149 2 0	....	..	.....	....	..	.....
July .. .. .. ,,	55,562	5	20,836 0 0	268	2	75 7 0	....	..	.....	....	..	.....
August .. .. .. ,,	33,549	2	12,581 0 0	530	..	149 1 0	10	..	2 8 0	....	..	.....
September .. .. ,,	47,541	7	17,865 11 0	648	5	181 14 0	....	..	.....	....	..	.....
October .. .. .. ,,	50,561	5	18,960 10 0	886	4	249 5 0	....	..	.....	....	..	.....
November .. .. .. ,,	66,654	5	24,995 8 0	235	3	66 3 0	10	..	2 8 0	....	..	.....
December .. .. .. ,,	56,059	1	21,022 3 0	1,010	2	284 2 0	32	..	8 0 0	84	..	2 10 0
January 1913	55,718	1	20,894 5 0	742	5	208 14 0	....	..	.....	....	..	.....
February .. .. ,,	14,237	7	5,340 7 0	143	4	40 6 0	12	..	3 0 0	....	..	.....
March .. .. .. ,,	24,348	6	9,134 3 0	268	..	75 6 0	....	..	.....	....	..	.....
Total ..	6,52,076	3	2,44,529 7 0	5,643	1	1,587 2 0	90	..	22 8 0	84	..	2 10 0
GRAND TOTAL ..	28,13,837	2	10,55,189 2 8	5,881	4	1,654 2 0	10,54,014	1	2,63,503 8 10	11,71,358	7	36,604 15 5
Deduct— Refunds passed by the Revenue and Refund Audit Officer ..	16,75,250	3	6,28,218 14 0	1,28,679	3	35,586 1 0	1,36,550	..	34,137 8 0	6,44,394	..	26,387 5 0
Net Revenue ..	11,38,586	7	4,26,970 4 8	....	..	.....	9,17,464	1	2,29,366 0 10	5,26,964	7	10,217 10 5
				1,22,797	7	33,911 15 0	....	..	.....	....	..	... ..

ABSTRACT.

	Rs. a. p.	Rs. a. p.	Rs. a. p.
Balance on 31st March 1912 due by—			
Port Trust	6,763 3 3		
G. I. P. Railway	33,888 3 6		
B. B. & C. I. Railway	1,442 9 0		
		42,093 15 9	
Add—			
Collections in 1912-1913—			
Port Trust	27,24,590 5 8		
G. I. P. Railway	7,78,722 13 9		
B. B. & C. I. Railway	3,34,614 14 0		
		38,47,929 1 5	
		38,90,023 1 2	
Deduct—			
Refunds paid in 1912-1913	20,86,376 5 0		
	Rs. a. p.		
Balance on 31st March 1913 due by— { Port Trust	13,306 11 10		
{ G. I. P. Railway	39,441 7 8		
{ B. B. & C. I. Railway ..	2,411 3 0		
	61,159 6 1	21,47,535 11 1	
Total .. Rs.		17,42,487 6 1	
Add—			
Amount of 1911-12 credited in the books of this office in 1912-13		12,547 6 3	
			17,55,034 12 4
Less—			
Amount credited in the books of this office in 1913-14		11,429 13 9	
Amounts of 1912-13 not adjusted in our books in 1912-13 for want of grants		1,473 15 3	
			12,903 13 0
Total as per Books of this office		Rs.	17,42,130 15 4

R. PEEL,
Acting Chief Accountant.

No. 3.

levied during 1912-13, under Section 192 (1) of the City of Bombay Municipal Act of 1888.

SUGAR AT 6 ANNAS PER CWT.				GHEE AT 10 ANNAS PER MAUND.			TIMBER AT 2½ PER CENT. ON MARKET VALUE.		FIREWOOD AT 2 ANNAS PER CANDY.			Total Monthly Collections.
Cwts.	qrs.	lbs.	Amount of Duty.	Mannds.	Seers.	Amount of Duty.	Value.	Amount of Duty.	Candies.	Mannds.	Amount of Duty.	
			Rs. a. p.			Rs. a. p.	Rs. a. p.	Rs. a. p.			Rs. a. p.	Rs. a. p.
193,575	3	23	1,96,237 15 8	20,171	34	12,607 6 6	7,55,272 4 6	18,881 12 11	76,829	9	9,541 2 8	2,86,373 2 8
205,971	0	0	1,62,785 8 0	22,743	11	14,214 8 9	6,25,957 8 0	15,648 15 0	41,862	..	5,232 14 0	2,23,991 1 3
29,837	1	7	14,918 10 6	11,295	35	7,063 10 9	6,31,266 0 8	15,781 10 5	339	21	42 7 6	64,878 7 6
115,290	1	0	57,630 2 0	16,339	21	10,212 3 3	4,15,264 2 8	10,382 1 6	117	..	14 10 0	1,68,152 2 90
198,717	2	17	90,858 13 3	15,869	12	9,918 5 0	7,13,062 1 4	17,826 8 10	49	21	6 2 6	1,18,488 0 8
304,907	3	0	1,52,203 14 0	22,238	..	13,898 12 0	3,77,344 12 8	9,433 9 11	4,153	..	519 2 0	2,01,980 10 1
225,002	0	21	1,12,501 1 6	14,712	28	9,195 6 3	8,52,160 6 8	21,304 0 2	29,313	7	3,664 2 6	1,82,161 7 4
440,344	3	14	2,20,172 1 0	6,011	12	3,757 1 0	7,18,360 13 4	17,971 8 4	22,332	21	2,791 9 6	2,94,707 11 1
696,268	0	11	3,48,134 0 9	9,146	7	5,716 5 9	7,75,732 14 8	19,393 13 2	36,405	7	4,550 10 6	4,20,619 13 7
461,455	1	14	2,30,727 11 0	5,567	23	3,473 7 9	5,81,333 5 4	14,533 5 4	61,241	24	7,655 3 9	2,56,889 7 10
440,187	3	0	2,20,093 14 0	7,320	25	4,575 6 3	7,55,322 8 0	18,883 1 0	60,895	17	7,611 15 3	2,93,341 4 8
225,552	3	7	1,16,276 8 6	10,325	23	6,453 7 9	8,12,951 0 8	20,323 12 5	69,432	7	8,679 0 6	2,18,431 0 2
3,814,131	0	2	19,07,065 8 2	161,721	28	1,01,076 1 0	80,12,567 14 8	2,00,314 3 2	403,472	22	50,309 1 8	27,34,590 5 8
5,650	3	0	2,825 6 0	4,915	22	3,072 3 6	2,050 0 0	51 4 0	328	..	103 8 0	95,495 8 6
4,880	2	0	2,440 4 0	5,018	21	3,134 11 3	572 8 0	14 5 0	1,011	14	126 7 0	98 639 2 3
5,959	2	14	2,979 13 0	4,688	14	2,930 3 6	1,462 8 0	36 9 0	1,288	..	161 0 0	65,672 1 6
5,093	3	14	2,545 7 0	6,484	11	4,052 10 9	2,580 0 0	64 0 0	142	14	17 13 0	61,942 5 6
7,037	2	0	3,518 14 0	6,487	19	4,054 10 9	485 0 0	12 2 0	4,041	14	505 2 0	63,710 0 9
9,433	3	14	4,717 15 0	4,772	13	2,982 11 3	5,265 0 0	131 10 0	4,259	14	532 7 0	88,795 13 3
20,215	3	14	5,157 15 9	16,647	26	10,404 12 6	18,657 8 0	466 7 0	1,717	..	214 10 0	97,726 13 0
5,698	1	0	2,804 2 0	22,804	4	14,252 9 0	12,720 0 0	482 4 0	1,477	..	184 10 0	62,320 6 0
10,110	0	14	5,055 1 0	22,465	21	14,040 15 3	7,952 8 0	198 13 0	1,065	..	135 6 0	70,477 11 3
8,669	2	14	4,334 13 0	15,173	34	9,483 10 6	12,560 0 0	314 0 0	2,018	..	252 4 0	62,342 13 3
11,638	2	14	5,819 5 0	21,017	20	13,136 1 3	6,137 8 0	153 7 0	2,497	..	312 2 0	62,620 14 3
10,945	1	0	5,472 10 0	15,112	24	9,445 6 0	15,212 8 0	380 5 0	1,572	14	196 9 0	61,563 4 0
95,403	0	14	47,701 9 0	145,584	38	90,990 9 6	92,205 0 0	2,305 2 0	21,036	14	2741 15 0	9,78,528 13 9
325	3	14	162 15 0	7,857	32	4,973 10 0	325 0 0	8 2 0	3,752	14	469 1 0	21,325 1 0
1	0	0	0 8 0	6,562	25	4,101 10 3	.....	.....	9,732	14	1,091 11 0	43,241 6 3
1	3	0	0 14 0	8,575	4	5,359 7 0	200 0 0	5 0 0	7,482	14	935 8 0	38,933 14 0
2	0	0	1 0 0	12,033	32	7,521 2 0	475 0 0	11 14 0	7,004	..	875 8 0	29,320 15 0
240	1	14	122 3 0	12,633	12	7,895 13 0	430 0 0	10 12 0	18,359	14	2,294 15 0	28,057 4 0
.....			.....	9,097	33	5,686 2 3	.....	.....	18,106	..	1,888 4 0	25,021 15 3
5	3	0	2 14 0	4,134	8	2,583 14 0	.....	.....	6,517	14	814 11 0	22,611 8 0
476	2	0	238 4 0	2,251	32	1,409 4 0	525 0 0	20 10 0	6,026	14	753 3 0	27,488 8 0
4	2	0	2 4 0	8,346	33	5,215 15 9	2,150 0 0	53 12 0	12,914	..	1,614 4 0	28,208 2 9
299	3	0	149 6 0	10,323	26	6,396 3 0	3,745 0 0	93 10 0	21,836	14	2,729 9 0	30,971 15 0
3,802	2	0	1,901 4 0	13,786	29	8,616 11 3	625 0 0	15 10 0	16,810	..	2,101 4 0	18,228 10 3
4,062	1	14	2,031 3 0	10,214	38	6,384 5 6	8,775 0 0	219 6 0	13,671	14	1,708 15 0	19,533 12 6
9,327	1	14	4,613 11 0	105,330	24	66,144 2 0	17,350 0 0	438 12 0	138,213	..	17,276 10 0	3,34,614 14 0
3,913,761	2	2	19,52,380 12 2	413,137	10	2,58,210 12 6	81,22,922 14 8	2,03,058 1 2	562,621	8	70,327 10 8	38,47,929 1 5
1,677,054	0	14	13,38,527 1 0	32,533	32	20,333 10 0	13,14,610 0 0	32,865 4 0	.....	..	.....	21,16,036 11 0
1,241,707	1	16	6,20,852 11 2	380,603	18	2,37,877 2 6	68,07,712 14 8	1,70,192 13 2	562,621	8	70,327 10 8	17,35,805 6 5
.....			.....	.....	..	.....	.....	.....	.....	..	.....	33,911 15 0
											Net Revenue .. Rs.	17,31,893 6 5

J. CRERAR,
Municipal Commissioner.

Appendix No. 3.A.

STATEMENT showing the net Revenue derived on different dutiable articles during the last ten years commencing from 1903-04 to 1912-13.

Articles.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 6.	@ annas 6.	@ annas 6.
Grain	3,78,048 0 0	3,15,734 5 9	2,77,592 8 11	3,00,796 3 6	2,90,720 4 0	3,22,386 2 0	2,70,212 1 9	4,43,484 15 8	4,67,041 1 4	4,36,970 4 8
	@ annas 3.	@ annas 3.	@ annas 3.	@ annas 3.	@ annas 3.	@ annas 3.	@ annas 3.	@ annas 4½.	@ annas 4½.	@ annas 4½.
Flour	—22,942 0 0	—23,615 0 9	—24,370 8 6	—23,680 15 0	—20,701 15 6	—16,150 11 9	—15,287 7 0	—26,023 5 0	—32,597 0 3	—33,911 15 0
	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.	@ annas 4.
Wines and Spirits ...	2,51,011 0 0	2,51,303 1 10	2,67,019 9 9	2,37,582 7 4	2,51,335 6 4	2,29,959 12 10	2,37,077 4 5	2,38,315 5 0	2,20,332 11 1	2,29,366 0 10
	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.	@ pies 6.
Beer	8,231 0 0	16,384 9 8	19,499 11 2	11,645 10 10	15,143 9 0	8,353 4 3	12,858 2 7	11,293 15 0	11,518 1 3	10,217 10 5

	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.	@ annas 8.
Sugar...	1,86,117 0 0	5,35,570 8 0	1,81,826 5 6	3,59,549 2 0	3,73,378 14 6	3,61,917 15 6	4,38,451 8 3	4,46,837 7 8	1,49,829 15 1	6,20,853 11 2
	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.	@ annas 10.
Ghee	2,21,287 0 0	2,29,309 2 1	2,44,473 7 3	2,42,731 10 9	2,53,304 12 0	2,51,745 12 1	2,45,195 1 10	2,54,687 13 2	2,69,599 15 6	2,37,877 2 6
	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀	@ 2½°/₀
Timber	1,29,304 0 0	1,45,269 8 4	1,64,302 3 1	1,77,011 10 4	1,52,349 0 4	1,64,969 12 11	1,74,592 10 10	1,53,924 14 5	1,95,427 10 10	1,70,192 13 2
	@ anna 1.	@ anna 1.	@ anna 1.	@ anna 1.	@ anna 1.	.....	.....	@ annas 2.	@ annas 2.	@ annas 2.
Firewood	36,067 0 0	36,824 11 9	36,407 12 9	36,168 12 3	13 6 0	.....	.....	70,248 5 1	72,056 1 10	70,327 10 8
Total Rs...	10,87,123 0 0	15,06,780 14 8	11,66,251 1 11	13,51,804 10 0	13,15,543 4 8	13,23,181 15 10	13,63,119 6 8	15,92,169 7 0	13,53,208 8 8	17,31,893 6 5

N.B.—This statement shows the net Revenue after deducting from gross collections refunds *passed* for payment by the Revenue and Refund Audit Officer, though such refunds may not actually have been fully paid.

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing the actual Collections, Refunds admitted and Net

ARTICLES.	1908-09.			1909-10.		
	Gross Collections.	Refunds.	Net Revenue.	Gross Collections.	Refunds.	Net Revenue.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Grain	4,66,180 10 0	1,43,794 8 0	3,22,386 2 0	5,35,718 15 9	2,65,506 14 0	2,70,212 1 9
Flour	1,156 1 8	17,306 13 0	—16,150 11 9	879 9 0	16,147 0 0	—15,267 7 0
Wines and Spirits	2,51,471 5 10	21,511 9 0	2,29,959 12 10	2,61,242 15 5	24,165 11 0	2,37,077 4 5
Beer	32,933 9 3	24,580 5 0	5,353 4 3	37,519 13 7	24,661 11 0	12,858 2 7
Sugar	14,96,188 11 6	11,34,270 13 0	3,61,917 15 6	16,15,909 12 3	11,77,458 4 0	4,38,451 8 3
Ghee	2,79,579 13 1	27,834 1 0	2,51,745 12 1	2,71,708 11 10	26,513 10 0	2,45,195 1 10
Timber	1,98,682 5 11	33,712 9 0	1,64,969 12 11	2,06,550 12 10	31,958 2 0	1,74,592 10 10
Firewood	.....	.....	.....	.....	.....	.....
Total Rs. ...	27,26,192 8 10	14,03,010 9 0	13,23,181 15 10	29,29,530 10 8	15,66,411 4 0	13,63,119 6 8

R. PEEL,
Acting Chief Accountant.

No. 3-B.

Revenue during the five years from 1908-09 to 1912-13.

1910-11.			1911-12.			1912-13.		
Gross Collections.	Refunds.	Net Revenue.	Gross Collections.	Refunds.	Net Revenue.	Gross Collections.	Refunds.	Net Revenue.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
8,22,756 8 8	3,79,271 9 0	4,43,484 15 8	9,88,014 10 4	5,20,973 9 0	4,67,041 1 4	10,55,189 2 8	6,28,218 14 0	4,26,970 4 8
954 8 0	36,977 13 0	— 26,023 5 0	1,018 4 9	33,615 5 0	—32,597 0 3	1,954 2 0	35,566 1 0	—33,911 15 0
2,61,553 13 0	23,238 8 0	2,38,315 5 0	2,47,953 10 1	27,620 15 0	2,20,332 11 1	2,63,503 8 10	34,137 8 0	2,29,366 0 10
37,186 12 0	25,892 13 0	11,293 15 0	39,320 12 3	27,802 11 0	11,518 1 3	36,604 15 5	26,387 5 0	10,217 10 5
17,89,022 8 8	13,42,185 1 0	4,46,837 7 8	12,82,756 0 1	11,32,926 1 0	1,49,829 15 1	19,59,880 12 2	13,38,527 1 0	6,20,853 11 2
2,81,971 5 2	27,283 8 0	2,54,687 13 2	2,90,479 12 6	20,879 13 0	2,69,599 15 6	2,58,210 12 6	20,333 10 0	2,37,877 2 6
1,86,851 11 5	32,526 13 0	1,53,324 14 5	2,26,649 15 10	31,222 5 0	1,95,427 10 10	2,03,053 1 2	32,865 4 0	1,70,192 13 2
70,248 5 1	.....	70,248 5 1	72,056 1 10	.....	72,056 1 10	70,327 10 8	.....	70,327 10 8
34,49,545 8 0	18,67,376 1 0	15,82,169 7 0	31,48,249 3 8	17,95,040 11 0	13,53,208 8 8	38,47,929 1 5	21,16,035 13 0	17,31,893 6 5

J. CRERAR,
Municipal Commissioner.

Appendix

Statement showing Town Duty Collections from each source month by month with

MONTH.	Grain.		Flour.		Wines and Spirits.		Beer.	
	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.
BOMBAY PORT TRUST.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
April	20,864 4 9	13,276 11 9	....	....	18,835 2 10	29,042 15 8	2,035 9 3	6,735 1 6
May	22,734 4 1	15,459 9 9	....	....	19,747 7 7	23,320 15 0	3,434 3 9	2,328 10 8
June	25,838 10 9	9,297 15 3	0 5 0	....	19,362 14 8	16,353 4 1	2,710 13 9	1,450 13 0
July	9,881 4 0	5,502 4 3	....	....	17,771 6 9	16,778 15 3	4,414 0 6	2,958 14 6
August	19,052 7 0	2,798 13 6	....	....	17,894 11 6	16,651 0 4	1,933 4 6	1,038 4 3
September	17,427 0 9	3,360 5 9	....	....	20,221 15 0	19,973 0 2	3,436 12 6	3,600 14 3
October	8,054 2 0	10,727 12 6	....	....	19,786 7 4	23,027 0 8	2,520 9 9	1,741 15 9
November	40,717 14 5	23,733 15 6	....	3 13 0	22,432 4 5	22,146 1 7	4,146 10 6	4,122 3 3
December	7,253 2 6	17,604 6 0	0 12 0	....	21,293 10 9	21,351 2 5	3,460 5 0	3,229 7 0
January	21,340 11 6	15,410 3 0	....	....	21,943 5 10	27,579 0 4	3,194 10 6	4,290 8 8
February	17,090 1 6	16,677 5 8	....	....	23,947 0 10	29,803 1 5	3,093 0 6	2,221 9 6
March	15,969 15 3	41,430 7 0	0 9 9	....	20,531 0 9	22,806 14 0	4,869 10 3	2,861 0 0
Total ..	2,29,943 14 4	1,76,378 13 5	1 10 9	3 13 0	2,47,297 8 1	2,63,943 5 10	38,920 10 3	36,199 6 5
G. I. P. RAILWAY.								
April	54,895 7 0	59,393 8 0	27 4 0	2 0 0	32 12 0	7 2 0	36 8 0	40 9 0
May	74,606 9 0	82,867 9 0	....	....	49 0 0	7 0 0	11 13 0	48 14 0
June	38,465 13 0	59,512 8 0	1 4 0	0 5 0	21 0 0	18 8 0	3 13 0	33 8 0
July	26,351 11 0	56,231 3 8	....	0 1 0	54 8 0	18 0 0	1 3 0	13 2 0
August	39,128 2 0	55,574 3 0	....	0 5 0	49 4 0	3 4 0	2 4 0	35 10 0
September	69,814 4 0	80,278 13 0	0 2 0	57 6 0	25 12 0	34 0 0	54 0 0	61 0 0
October	30,796 3 0	41,480 12 6	0 2 0	1 7 0	50 12 0	5 8 0	34 14 0	47 4 0
November	44,281 3 0	46,032 6 0	0 15 0	....	46 0 0	48 12 0	54 15 0	25 11 0
December	58,262 11 0	50,942 12 0	4 5 0	....	167 8 0	65 0 0	37 10 0	58 11 0
January	66,589 8 0	48,417 1 0	1 10 0	1 6 0	89 4 0	14 12 0	118 13 0	18 0 0
February	57,167 0 0	38,548 15 0	0 9 0	....	29 0 0	2 0 0	18 15 0	18 0 0
March	44,864 14 0	46,040 11 0	1 0 0	0 5 0	15 8 0	6 12 0	20 0 0	25 30 0
Total ..	5,83,114 5 0	6,84,380 14 8	37 3 0	63 3 0	598 4 0	237 10 0	394 11 0	402 15 0
B. B. & C. I. RAILWAY.								
April	13,151 10 0	16,163 9 0	83 9 0	41 4 0	....	6 8 0	....	....
May	28,051 9 0	43,081 7 0	28 5 0	66 2 0	....	....	2 6 0	....
June	17,546 4 0	38,934 2 0	43 15 0	149 2 0	....	....	....	....
July	10,839 6 0	20,836 0 0	42 14 0	75 7 0	0 8 0	....	3 1 0	....
August	13,359 13 0	12,681 0 0	59 15 0	149 1 0	3 0 0	2 8 0	....	....
September	9,074 8 0	17,365 11 0	133 15 0	131 14 0	....	....	....	....
October	8,524 5 0	13,960 10 0	124 2 0	249 5 0	....	....	....	....
November	10,717 4 0	24,895 3 0	44 13 0	66 3 0	....	2 8 0	....	....
December	10,975 5 0	21,022 3 0	32 12 0	284 2 0	....	3 0 0	....	2 10 0
January	15,620 7 0	29,894 5 0	68 3 0	208 14 0	22 8 0	....	....	....
February	22,298 2 0	5,560 7 0	132 9 0	40 5 0	80 8 0	3 0 0	....	....
March	14,897 14 0	9,134 9 0	184 7 0	75 6 0	11 6 0	....	....	....
Total ..	1,75,856 7 0	2,44,529 7 0	979 7 0	1,587 2 0	67 14 0	22 8 0	5 7 0	2 10 0
GRAND TOTAL ..	9,88,914 10 4	10,55,189 2 8	1,018 4 9	1,654 2 0	2,47,963 10 1	2,63,903 5 10	39,320 12 3	36,604 15 5
Less— REFUNDS PASSED BY THE R. & R. A. OFFICER	5,20,973 9 0	6,28,218 14 0	33,615 5 0	35,566 1 0	27,620 15 0	34,127 8 0	27,802 11 0	26,387 5 0
NET REVENUE ..	4,67,041 1 4	4,26,970 4 8	—32,597 0 3	—33,911 15 0	2,20,332 11 1	2,29,366 0 10	11,518 1 3	10,217 10 5

* Revenue from Town Duties—

	Rs. a. p.
For 1912-1913	17,21,893 6 6
For 1911-1912	13,53,208 8 8
Increase of Rs.	3,78,684 13 9

	Rs. a. p.		
Add—Refunds admitted by the R. & R. A. Officer, for 1911-12	17,55,040 11 0		
Refunds passed by the Account Office for 1911-12	18,76,209 11 0		
Difference .. Rs.	81,169 0 0		
Difference between the Collection payable on 1st April 1911 and 1st April 1912—			
Rs. a. p. 29,699 5 6			
42,093 15 9			
	12,394 10 3		
Collection pertaining 1911-12 booked in 1912-13	12,547 6 3		
		1,08,111 0 6	
Add—Refunds admitted by the R. & R. A. Officer for 1912-13 .. .. .. Rs	21,16,035 11 0		
Refunds passed by the Account Office for 1912-13 .. .. .. ,,	20,86,376 5 0		
Difference .. Rs.	29,659 6 0		
Less—Difference between collection payable on 1st April 1912 and 1st April 1913—			
Rs. 42,093 15 9			
,, 61,159 6 1			
	19,065 6 4		
		10,593 15 8	
		4,95,389 13 11	
		356 6 9*	

Less—Difference between the amounts credited in 1912-13 and the amounts to be credited in the books for 1912-1 .

Rs.	19,547 6 3
,,	19,903 13 0
Rs.	356 6 9*

Increase shown in Appendix No. 2 .. Rs. 4,95,033 7 2

R. PEEL,
Acting Chief Accountant.

No. 3-C.

the refunds admitted for the year 1912-13 as contrasted with those for the year 1911-12.

Sugar.		Ghee.		Timber.		Firewood.		Total.	
1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1911-12.	1912-13.	1912-13.	1912-13.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1,10,042 7 6	1,06,287 15 8	13,014 14 9	12,607 6 6	16,724 12 0	18,881 12 11	8,890 9 9	9,541 2 8	1,20,407 12 10	2,86,373 2 8
1,80,673 9 6	1,59,785 8 0	10,661 5 3	14,814 8 9	22,421 4 3	15,648 15 0	7,932 3 7	5,223 14 0	2,05,054 6 9	2,28,991 1 3
52,348 2 7	14,918 10 6	6,481 14 6	7,053 10 9	14,413 2 9	15,781 10 5	35 3 6	42 7 6	1,21,761 3 6	64,878 7 6
37,700 1 6	57,639 2 0	5,253 4 0	10,312 3 3	26,498 6 11	10,832 1 8	3 6 0	14 10 0	1,00,891 12 8	1,04,439 2 10
1,24,581 5 6	90,258 13 3	11,240 13 6	9,013 5 0	17,289 11 10	17,826 8 10	14 7 0	6 3 6	1,01,796 12 4	1,38,488 0 8
85,379 3 0	1,52,208 14 0	7,181 2 0	13,998 12 0	16,597 9 10	9,633 9 11	270 2 0	519 2 0	1,45,433 13 1	2,02,359 10 1
1,06,370 14 9	1,12,501 1 6	10,388 14 6	9,195 6 3	19,344 13 7	21,304 0 2	4,162 2 6	3,664 2 6	1,71,628 0 3	1,93,761 7 4
75,628 9 3	2,20,172 7 0	14,281 3 6	3,757 1 0	21,086 4 7	17,971 8 4	5,074 2 3	2,791 9 6	1,87,287 0 7	2,94,707 11 1
1,08,574 13 3	3,48,134 0 9	13,701 11 3	5,716 5 9	13,307 6 6	19,395 13 2	4,478 11 9	4,550 10 6	1,70,066 9 11	4,20,019 13 7
1,75,131 9 0	2,24,727 11 0	14,517 1 3	3,473 7 9	36,136 14 8	14,533 5 4	6,813 2 0	7,635 2 9	2,69,057 6 9	2,98,889 7 10
37,067 9 6	2,20,068 14 0	13,033 2 6	4,575 6 3	15,959 6 3	18,883 1 0	6,993 10 0	7,611 15 3	1,19,393 14 7	2,92,341 4 8
1,55,031 4 3	1,16,276 6 6	13,406 2 3	6,453 7 9	12,916 8 8	20,323 12 3	9,167 7 6	8,679 0 6	2,34,992 10 8	3,16,631 0 2
13,48,639 9 1	19,07,065 8 2	1,33,081 9 3	1,01,076 1 0	2,25,826 4 10	2,00,314 3 2	55,385 8 10	50,909 1 3	21,73,626 6 5	27,34,590 5 8
4,661 5 0	2,825 6 0	4,478 3 3	3,072 3 6	91 7 0	51 4 0	277 12 0	103 6 0	45,009 10 3	45,495 8
3,240 13 0	2,440 4 0	1,478 2 9	3,134 11 3	100 10 0	14 5 0	156 2 0	128 7 0	79,653 1 9	88,639 2 3
419 3 0	2,979 13 0	3,469 10 9	2,990 3 6	102 15 0	36 9 0	284 2 0	161 0 0	43,821 12 9	44,672 1 6
1,764 4 0	2,545 7 0	3,847 2 6	4,052 10 9	31 15 0	64 0 0	144 8 0	17 13 0	39,178 3 6	61,942 5 6
2,183 14 0	3,518 24 0	3,369 5 9	4,054 10 9	53 11 0	12 2 0	222 6 0	505 3 0	44,948 14 9	62,710 0 9
3,906 12 0	4,717 15 0	6,130 8 6	2,982 11 3	45 9 0	131 10 0	321 2 0	432 7 0	76,308 1 6	58,795 13 3
2,803 7 0	5,157 15 0	11,413 12 6	10,494 12 6	9 12 0	466 7 0	337 12 0	214 10 0	45,443 10 6	87,728 13 0
3,518 7 0	2,804 2 0	11,421 0 9	14,253 9 0	213 8 0	482 4 0	279 10 0	184 10 0	59,815 14 9	63,380 6 0
3,005 8 0	5,055 1 0	12,799 10 6	14,040 15 3	84 13 0	198 13 0	275 12 0	135 6 0	74,637 13 6	70,477 11 3
4,299 15 0	4,334 13 0	10,845 3 6	9,483 10 6	98 5 0	314 0 0	219 4 0	252 4 0	81,652 13 6	63,842 13 6
5,078 12 0	5,849 5 0	9,385 12 6	13,136 1 3	14 5 0	153 7 0	280 13 0	312 2 0	72,956 2 6	68,020 14 3
4,354 2 0	5,472 10 0	7,247 11 6	8,445 6 0	17 5 0	380 5 0	209 2 0	196 9 0	56,799 10 6	61,568 4 0
39,491 6 0	47,701 9 0	86,077 4 9	90,990 9 6	884 3 0	2,305 2 0	3,092 6 6	2,741 15 0	7,13,662 10 9	7,78,723 13 9
....	169 15 0	9,617 0 0	4,973 10 0	27 8 0	8 2 0	1,733 12 0	469 1 0	24,613 7 0	21,825 1 0
....	0 8 0	4,840 2 0	4,101 10 3	25 10 0	....	1,049 13 0	1,091 11 0	33,997 13 0	49,241 6 3
1 6 0	0 14 0	5,122 8 0	5,559 7 0	24 8 0	5 0 0	1,405 5 0	935 5 0	25,243 13 0	38,982 14 0
0 11 0	1 0 0	7,031 14 0	7,821 2 0	22 8 0	11 14 0	996 7 0	975 8 0	18,597 5 0	29,320 15 0
0 13 0	123 3 0	5,210 3 0	7,895 13 0	....	10 12 0	715 13 0	2,224 15 0	29,846 7 0	28,057 4 0
....	....	6,983 3 0	5,665 3 3	10 0 0	....	1,459 13 0	1,883 4 0	17,691 7 0	25,821 15 3
....	2 14 0	4,138 12 0	2,582 14 0	15 10 0	....	831 4 0	814 11 0	13,284 1 0	23,611 6 0
20 8 0	288 4 0	6,246 8 0	1,409 4 0	....	20 10 0	923 11 0	752 3 0	17,952 13 0	27,485 8 0
87 8 0	2 4 0	4,292 2 0	5,215 15 9	....	53 12 0	1,375 4 0	1,614 4 0	16,543 0 0	28,203 2 9
369 12 0	149 6 0	6,711 0 6	6,396 3 0	13 2 6	93 13 0	1,094 10 0	2,729 5 0	20,737 9 3	30,471 15 0
147 1 0	1,941 4 0	5,918 1 0	5,816 11 3	20 10 0	15 10 0	721 12 0	2,101 4 0	29,168 11 0	18,238 10 2
4 7 0	2,021 3 0	5,209 9 0	5,384 5 6	....	219 6 0	932 2 0	1,706 15 0	21,339 12 6	19,553 12 6
632 1 0	4,613 11 0	71,320 14 6	66,144 2 0	159 8 0	438 12 0	13,138 8 0	17,276 10 0	3,63,060 2 6	3,84,614 14 0
12,25,756 0 1	19,59,380 12 2	2,90,479 12 6	2,58,310 12 6	2,26,647 15 10	2,03,068 1 2	72,056 1 10	70,327 10 8	31,48,349 3 8	38,47,929 1 5
11,32,926 1 0	13,38,527 1 0	20,879 13 0	20,233 10 0	31,222 5 0	32,865 4 0	....	....	17,95,040 11 0	21,16,035 11 0
1,49,829 15 1	6,20,853 11 2	2,69,599 15 6	2,37,877 2 6	1,95,427 10 10	1,70,192 13 2	72,056 1 10	70,327 10 8	13,53,308 8 8	17,31,893 6 5

J. CREAR,
Municipal Commissioner.

Appendix No. 4.

CONTRASTED STATEMENT showing the Original Budget Grants for 1912-13, Renewed Grants for 1911-12 and previous years, Additional Grants, Transfers, Modifications, as per Revised Estimate for 1912-13, and the Grants as finally sanctioned.

PARTICULARS.	Original Grants sanctioned by the Corporation under Section 129 of the Municipal Act.	Additional Grants sanctioned by the Corporation under Section 131 (1).	Additional Grants sanctioned by the Corporation in respect of unexpended balances of Grants for 1910-11 and previous years required for expenditure in 1912-13 and of transfers sanctioned in 1911-12 but not utilised in that year and of Budget Grants for 1911-12, not wholly or partially utilised in that year.	Lapsed Grants for 1911-12 renewed by the Standing Committee under Section 132.	*Add*—Transfers as per Section 131 (1) *b* and *c* and (2)	*Deduct*—Transfers as per Section 131 (1) *c* and *c*.	Total.	*Less*—Anticipated Savings as per Revised Estimates of Expenditure for 1912-13.	Final Sanctioned Grants.
1	2	3	4	5	6	7	8	9	10
GENERAL SUPERINTENDENCE—	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Corporation and Standing Committee Establishment	73,772 0 0	2 0 0	....	1,246 13 4	3,055 0 0	1,105 0 0	76,970 13 4	....	76,970 13 4
Municipal Commissioner's Personal Office Establishment	60,431 0 0	....	....	....	3,285 0 0	....	63,716 0 0	....	63,716 0 0
General Office Establishment ..	1,02,238 0 0	29 14 0	9,000 0 0	34,822 9 8	3,947 0 0	9,926 0 0	1,40,203 7 8	....	1,40,203 7 8
Accounts and Expenditure Audit Establishment	89,764 0 0	4,572 9 4	....	37 8 0	200 0 0	920 0 0	93,654 1 4	....	93,654 1 4
Total Rs.	3,26,205 0 0	4,598 7 4	9,000 0 0	36,006 15 0	13,487 0 0	11,950 0 0	3,74,544 6 4	....	3,74,544 6 4
ASSESSMENT & COLLECTION DEPT.—									
Property and Wheel Tax Estt. ..	2,19,075 0 0	1,260 0 0	....	79 11 8	870 0 0	1,570 0 0	2,19,705 11 8	354 0 0	2,19,351 11 8
Town Duty Collection	1,05,900 0 0	6,668 13 1	....	1,229 3 4	8,800 0 0	....	1,21,598 0 5	.... 90 0 0	1,21,598 0 5
Tolls Collection	660 0 0	....	....	....	....	....	660 0 0	870 0 0	870 0 0
Licensing Establishment	22,029 0 0	1,025 0 0	....	55 8 1	200 0 0	....	23,309 6 1	....	23,309 6 1
Revenue and Refund Audit Office Establishment	1,02,779 0 0	....	....	....	....	8,800 0 0	94,279 0 0	4,045 0 0	90,234 0 0
Total Rs.	4,49,543 0 0	8,950 13 1	....	1,365 5 1	9,370 0 0	10,070 0 0	4,59,349 2 2	4,489 0 0	4,54,860 2 2
FIRE BRIGADE	2,45,782 5 6	14,000 0 0	74,880 0 0	9,350 13 5	1,300 0 0	5,687 0 0	3,39,606 2 11	1,000 0 0	3,38,606 2 11
	2,45,782 5 6	14,000 0 0	74,880 0 0	9,350 13 5	1,300 0 0	5,687 0 0	3,39,606 2 11	1,000 0 0	3,38,606 2 11
MAINTENANCE OF PUBLIC GARDENS.									
Victoria Gardens ..	73,129 0 0	....	3,784 4 8	7,381 5 4	....	....	89,294 10 0	3,116 12 9	86,177 13 3
Elphinstone Circle do. ..	1,720 0 0	....	....	569 0 0	....	....	2,289 0 0	39 0 0	2,250 0 0
Falkland Road do. ..	432 0 0	....	95 0 0	108 0 0	....	....	635 0 0	9 0 0	626 0 0
Nowshirook do. ..	1,610 0 0	....	....	561 11 1	....	....	2,171 11 1	191 12 5	1,979 14 8
Sir C. Jahangir Mahim do. ..	664 0 0	....	....	164 0 0	....	....	828 0 0	15 14 5	812 1 7
Bazar Gate Street do. ..	412 0 0	....	....	113 0 0	....	....	525 0 0	.. ..	525 0 0
Dick't Tank do. ..	382 0 0	....	....	100 0 0	....	....	482 0 0	3 16 10	478 0 2
Malabar Hill do. ..	1,202 0 0	....	....	206 0 0	....	....	1,407 0 0	32 12 8	1,374 3 4
Esplanade do. ..	5,894 0 0	....	....	15 0 0	....	....	5,909 0 0	....	5,909 0 0
Chowpatty Band Stand ..	1,900 0 0	....	....	....	....	....	1,900 0 0	....	1,900 0 0
Flora and Wellington Fountains and the Queen's Statue ..	....	1,000 0 0	....	....	....	....	1,000 0 0	....	1,000 0 0
New Works Gardens	11,798 0 0	....	3,950 10 2	4,703 6 5	....	....	20,452 0 7	136 11 11	20,315 4 8
Total Rs.	99,143 0 0	1,000 0 0	12,759 14 10	13,920 6 10	....	....	1,26,823 5 8	3,546 0 0	1,23,277 5 8
PUBLIC WORKS (ENGINEER'S DEPARTMENT.)—									
I—*General Supervision and Miscellaneous Duties*	87,674 0 0	3,010 15 6	....	43 12 4	1,440 0 0	2,832 0 0	89,335 11 10	7,500 0 0	81,835 11 10
II—*Mechanical Branch*—									
A. Workshops	....	....	....	....	....	....	....	....	....
B. Maintenance of P. Station at Colaba ..	32,855 0 0	....	26 0 0	194 0 0	1,765 0 0	....	34,840 0 0	....	34,840 0 0
C. Do. of Love Grove P. Station ..	1,31,747 0 0	....	....	498 0 0	16,038 0 0	1,985 0 0	1,46,316 0 0	2,395 0 0	1,43,920 0 0
D. Do. of Air C. Station at Love Grove ..	80,324 0 0	....	....	7,300 0 0	200 0 0	10,213 0 0	77,611 0 0	....	77,611 0 0
E. Do. of Storm-water Sluices ..	2,414 0 0	....	....	180 0 0	....	....	2,594 0 0	....	2,594 0 0
III—*Sanitary*—									
Disposal of Town Sweepings ..	1,25,087 0 0	....	....	6,886 5 2	3,950 0 0	15,507 0 0	1,20,416 5 2	12,000 0 0	1,08,416 5 2
IV—*Drainage*—									
A. Miscellaneous Drainage ..	2,60,408 0 0	370 0 0	4,224 4 3	6,291 3 10	2,001 4 0	1,001 4 0	2,72,291 8 1	....	2,72,291 8 1
B. Maintenance of Sluices ..	3,394 0 0	....	....	....	....	....	3,394 0 0	....	3,394 0 0
V—*Water Works*	4,39,290 0 0	3,853 14 5	17,290 5 0	47,275 14 1	13,985 11 0	23,225 11 0	4,89,475 1 6	8,970 0 0	4,80,505 1 6
VI—*Streets and Buildings*—									
A. Inspection and Supervision ..	1,91,699 0 0	....	....	114 1 6	435 0 0	....	1,91,648 1 6	7,002 0 0	1,84,646 1 6
B. Public Lighting	4,54,069 0 0	233 2 6	....	12,458 7 1	....	291 0 0	4,66,468 10 7	5,000 0 0	4,61,468 10 7
C. Road Watering..	95,000 0 0	....	13,545 0 1	200 0 0	....	....	1,08,745 0 1	5,000 0 0	1,03,745 0 1
C. Oiling and Tarring Roads ..	80,000 0 0	40,000 0 0	....	11,788 10 11	18,000 0 0	....	99,786 10 11	....	99,786 10 11
D. Roads and Footpaths, &c. ..	5,60,552 0 0	4,685 14 3	20,490 7 8	7,021 11 11	9,270 0 0	26,733 0 0	5,74,597 1 10	5,000 0 0	5,69,597 1 10
E. Street Improvements... ..	1,13,925 0 0	....	20,270 2 2	5,355 0 0	....	....	1,39,550 2 2	....	1,39,550 2 2
F. Miscellaneous	1,850 0 0	....	3,000 0 0	....	....	....	4,850 0 0	....	4,850 0 0
VII—*Cleaning, Lighting, &c., Port Trust Wharves & Roads* ..	40,183 0 0	....	....	....	....	....	40,183 0 0	....	40,183 0 0
Total Rs. ..	26,49,409 0 0	51,557 15 8	78,756 3 3	3,05,501 2 10	67,684 15 0	81,767 15 0	28,70,441 5 9	52,867 0 0	28,17,574 5 9
Carried forward Rs. ..	37,70,082 5 6	80,104 4 1	1,75,376 2 1	1,65,734 11 2	88,441 15 0	1,08,874 15 0	41,70,864 6 10	61,902 0 0	41,08,962 6 10

Appendix No. 4—*continued.*

PARTICULARS.	Original Grants sanctioned by the Corporation under Section 129 of the Municipal Act.	Additional Grants sanctioned by the Corporation under Section 151 (1).	Additional Grants sanctioned by the Corporation for specific works not included in the Budget and for which sanction was given in 1911-12 but not utilized in that year, and of Budget Grants for 1911-12 not wholly or partially utilized in that year.	Lapsed Grants for 1911-12 renewed by the Standing Committee under Section 152.	*Add*—Transfers as per Section 131 (1) *b* & *c* and (2).	*Deduct*—Transfers as per Section 132 (1) *a* & *c*.	Total.	*Less*—Anticipated Savings as per Revised Estimates of Expenditure for 1912-13.	Final Sanctioned Grants.
1	2	3	4	5	6	7	8	9	10
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward Rs. ..	37,70,082 5 6	80,104 4 1	1,75,376 2 1	1,65,734 11 2	88,411 15 0	1,08,874 15 0	41,70,864 6 10	61,962 0 0	41,08,962 6 10
PUBLIC HEALTH DEPARTMENT—									
General Supervision	1-34,131 8 0	30 8 0	535 0 0	302 10 6	4,350 0 0	800 0 0	1,38,549 10 6	....	1,38,549 10 6
Conservancy Branch	17,14,841 6 0	1,431 14 11	31,076 12 3	59,463 12 11	57,926 8 0	45,192 8 0	18,19,576 0 1	....	18,19,576 0 1
Markets and Slaughter Houses ..	1,95,170 0 0	7 2 6	7,903 10 5	3,738 11 0	15,726 0 0	3,726 0 0	2,18,809 7 11	....	2,18,809 7 11
Registration of Births and Deaths.	85,466 8 0	24 13 3	.....	100 0 0	300 0 0	....	86,891 5 3	....	86,891 5 3
Cemeteries	21,250 0 0	....	48 0 0	236 4 4	100 0 0	5,000 0 0	16,134 4 4	....	16,134 4 4
Laboratory	18,908 8 0	....	....	3,007 7 0	512 0 0	....	19,427 15 0	....	19,427 15 0
Mahaluxmi Dhobiwada	16,651 0 0	....	....	530 14 4	40 0 0	....	17,221 14 4	....	17,221 14 4
Infectious Diseases	53,102 8 0	125 5 7	....	1,781 13 4	16,900 0 0	1,925 0 0	70,884 10 11	....	70,884 10 11
Milch-Cattle Stables and Rooms ..	7,477 0 0	....	....	726 6 5	.....	146 0 0	8,057 6 5	....	8,057 6 5
Dispensaries	13,815 8 0	....	....	82 8 0	800 0 0	....	14,698 0 0	....	14,698 0 0
Rustomji Jamsetji Dharamsala at Falkland Road	720 0 0	....	....	320 10 11	6 0 0	....	1,046 10 11	....	1,046 10 11
Vaccination	29,371 0 0	....	....	389 0 0	400 0 0	471 0 0	29,689 0 0	71 0 0	29,686 0 0
Malaria	40,000 0 0	....	....	....	20,000 0 0	.. ..	60,000 0 0	....	60,000 0 0
Total Rs.	23,25,915 0 0	1,619 12 3	39,563 6 8	75,650 2 9	1,17,099 8 0	56,360 8 0	25,02,978 5 8	71 0 0	25,02,907 5 8
NEW WORKS	1,79,427 0 0	42,596 14 8	1,44,904 9 0	1,01,521 12 6	17,361 0 0	2,389 0 0	4,83,422 4 2	23,100 0 0	4,60,322 4 2
Total Rs.	1,79,427 0 0	42,596 14 8	1,44,904 9 0	1,01,521 12 6	17,361 0 0	2,389 0 0	4,83,422 4 2	23,100 0 0	4,60,322 4 2
GENERAL STORES ESTABLISHMENT	35,384 0 0	1,175 0 0	2,525 12 9	1,217 8 0	1,200 0 0	600 0 0	40,902 4 9	400 0 0	40,502 4 9
Total Rs.	35,384 0 0	1,175 0 0	2,525 12 9	1,217 8 0	1,200 0 0	600 0 0	40,902 4 9	400 0 0	40,502 4 9
CENSUS	.. ..	145 6 0	4,000 0 0	....	....	....	4,145 6 0	....	4,145 6 0
Total Rs.	.. ..	145 6 0	4,000 0 0	....	....	....	4,145 6 0	....	4,145 6 0
EDUCATION—									
Primary Education	3,37,257 0 0	....	....	....	....	....	3,37,257 0 0	....	3,37,257 0 0
School for Deaf and Dumb Mutes .	3,000 0 0	....	....	....	....	....	3,000 0 0	....	3,000 0 0
Veterinary College	2,500 0 0	....	....	....	....	....	2,500 0 0	....	2,500 0 0
Victoria and Albert Museum ..	15,394 0 0	....	1,013 9 3	186 11 0	1,390 0 0	390 0 0	17,574 4 3	2 0 6	17,572 3 9
Victoria Jubilee Technical Institute	20,000 0 0	....	....	....	....	....	20,000 0 0	....	20,000 0 0
Joint Schools Committee Establishment	12,973 0 0	....	348 10 2	....	65 0 0	65 0 0	13,321 10 2	187 15 4	13,133 10 10
Victoria Memorial School for Blind.	2,500 0 0	....	....	....	....	....	2,500 0 0	....	2,500 0 0
Prince of Wales Museum	25,000 0 0	....	....	....	....	....	25,000 0 0	....	25,000 0 0
Total Rs. ..	4,18,624 0 0	....	1,362 3 5	186 11 0	1,455 0 0	455 0 0	4,21,152 14 5	140 0 0	4,21,012 14 5
HOSPITALS—									
Acworth Leper Asylum at Matunga	36,000 0 0	....	....	....	....	8,000 0 0	28,000 0 0	....	28,000 0 0
Medical Institutions	4,14,500 0 0	....	....	....	....	....	4,14,500 0 0	....	4,14,500 0 0
Adams Wylie Hospital	4,000 0 0	....	....	....	....	....	4,000 0 0	....	4,000 0 0
Bombay Sanitary Association ..	1,500 0 0	....	....	....	....	....	1,500 0 0	....	1,500 0 0
Total Rs. ..	4,56,000 0 0	....	....	....	....	8,000 0 0	4,48,000 0 0	....	4,48,000 0 0
MISCELLANEOUS—									
Pensions, Gratuities and Compassionate Allowances	90,000 0 0	....	....	5,562 15 0	10,000 0 0	....	1,05,562 15 0	....	1,05,562 15 0
Discretional Contingencies	7,900 0 0	1,056 4 0	....	1,220 4 3	....	....	9,276 8 3	....	9,276 8 3
Auditor's Allowances	10,000 0 0	....	....	....	....	....	10,000 0 0	....	10,000 0 0
Grain Compensation	....	1,58,825 6 4	....	....	....	....	1,58,825 6 4	....	1,58,825 6 4
Local Allowance	60,000 0 0	....	....	150 0 0	....	....	60,150 0 0	....	60,150 0 0
House Rent Allowance to Municipal Peons	....	....	....	73 4 9	....	....	73 4 9	....	73 4 9
Loss on account of Private Works irrecoverable bills written off ..	....	267 6 0	....	....	....	....	267 6 0	....	267 6 0
Miscellaneous carried over ..	1,67,000 0 0	1,60,149 0 4	....	7,006 8 0	10,000 0 0	....	3,44,155 8 4	....	3,44,155 8 4
Carried over ..	71,35,532 5 6	1,23,641 5 0	3,67,732 1 11	3,44,290 13 5	2,26,548 7 0	1,77,279 7 0	80,71,465 9 10	23,613 0 0	79,33,852 9 10

Appendix No. 4—*concluded.*

PARTICULARS.	Original Grants sanctioned by the Corporation under Section 129 of the Municipal Act.	Additional Grants sanctioned by the Corporation under Section 131 (1).	Additional Grants sanctioned by the Corporation in respect of unexpended balances of Grants for 1910-11 and previous years required for expenditure in 1911-12 and of moneys sanctioned in 1911-12 but not utilised in that year, and of Budget Grants for 1911-12 not wholly or partially utilised in that year.	Lapsed Grants for 1911-12 restored by the Standing Committee under Section 182.	*Add*—Transfers as per Section 131 (3) b & c (2).	*Deduct*—Transfers as per Section 133 (1) a & c.	Total.	*Less*—Anticipated Savings as per Revised Estimate of Expenditure for 1912-13.	Final Sanctioned Grants.
1	2	3	4	5	6	7	8	9	10
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ..	71,85,532 5 6	1,25,641 5 0	3,67,732 1 11	3,44,290 13 5	2,25,648 7 0	1,77,279 7 0	80,71,465 9 10	85,613 0 0	79,85,852 9 10
MISCELLANEOUS—*contd.*									C
Brought forward ..	1,67,000 0 0	1,60,149 0 4	....	7,005 8 0	10,000 0 0	....	3,44,155 8 4	....	3,44,155 8 4
Rebate due to the City Improvement Trust under Section 73 (3) of Act IV of 1898	....	....	....	....	....	....	....	....	....
Loss on account of deficiency in the stock at the Belassis Bridge Pipe Depôt written off	....	1,538 2 6	....	....	....	....	1,538 2 6	....	1,538 2 6
Charges in connection with the illumination of the Municipal Office Buildings, etc., during Royal Visit	....	29,800 0 0	....	....	....	....	29,800 0 0	....	29,800 0 0
Contribution towards the building to be erected at the Apollo Bunder to commemorate the Visit of His Imperial Majesty the King-Emperor of India	....	1,00,000 0 0	....	....	....	....	1,00,000 0 0	....	1,00,000 0 0
Refund of a portion of the amount recovered for the right of collecting fees at the scale shed at A. C. Markets	....	1,000 0 0	....	....	....	....	1,000 0 0	....	1,000 0 0
Cost of providing permanent flag staffs on Municipal Office Buildings, etc.	....	....	....	447 10 10	....	....	447 10 10	....	447 10 10
Contribution for the first year towards the expenses of King George V Anti-tuberculosis League	....	10,000 0 0	....	....	....	....	10,000 0 0	....	10,000 0 0
Compensation to a victoria driver in respect of his claim for damage caused to his carriage ..	....	125 0 0	....	....	....	....	125 0 0	....	125 0 0
Cost of caskets and addresses to be presented to Lord Sydenham the retiring Governor and to Lord Willingdon the Governor designate and other expenses in connection therewith...	....	2,250 0 0	....	....	....	....	2,250 0 0	....	2,250 0 0
Total Rs. ..	1,67,000 0 0	3,04,862 2 10	.....	7,454 2 10	10,000 0 0	....	4,89,316 5 5	....	4,89,316 5 5
CONTRIBUTION TO THE CITY IMPROVEMENT TRUST UNDER SECTION 72 (1) OF ACT IV OF 1898..	9,25,000 0 0	....	....	....	....	....	9,25,000 0 0	....	9,25,000 0 0
Total Rs. ..	9,25,000 0 0	....	....	....	....	....	9,25,000 0 0	....	9,25,000 0 0
PLAGUE EXPENSES	2,00,000 0 0	3,174 9 8	....	7,000 0 0	....	24,269 0 0	1,85,905 9 8	33,387 0 0	1,52,518 9 8
Total Rs. ..	2,00,000 0 0	3,174 9 8	....	7,000 0 0	....	24,269 0 0	1,85,905 9 8	33,387 0 0	1,52,518 9 8
MUNICIPAL DEBT—									
Interest on Loans .. &.. ..	26,29,490 7 0	....	61,878 3 0	90,440 0 0	....	34,100 0 0	27,57,708 10 0	....	27,57,708 10 0
Charges on account of Loans ..	12,048 2 2	....	....	....	100 0 0	....	12,146 2 2	....	12,146 2 2
Payment towards the reduction of debt	1,34,830 9 0	....	13,000 0 0	4,500 0 0	....	....	1,51,830 9 0	....	1,51,830 9 0
Payment towards the Investment of Sinking Fund	6,16,216 8 4	....	....	....	....	....	6,16,216 8 4	....	6,16,216 8 4
Total Rs. ..	34,02,083 10 6	....	74,878 3 0	94,940 0 0	100 0 0	34,100 0 0	35,37,901 13 6	....	35,37,901 13 6
INVESTMENTS—									
Municipal Buildings Fire Insurance Fund	10,000 0 0	....	....	....	....	....	10,000 0 0	....	10,000 0 0
Total Rs. ..	10,000 0 0	....	....	....	....	....	10,000 0 0	....	10,000 0 0
Rs. ..	1,19,89,616 0 0	4,38,678 1 6	4,42,610 4 11	4,53,685 0 3	2,35,648 7 0	2,35,648 7 0	13,49,589 6 8	1,19,000 0 0	1,31,00,589 0 0
Adjustment (part) of the advance of Rs. 9,10,053-7-4 outstanding under "Plague Expenditure Suspense Adjustment Account" ..	1,10,053 0 0	2,00,000 0 0	....	....	....	....	3,10,053 0 0	....	3,10,053 0 0
Rs. ..	1,10,053 0 0	2,00,000 0 0	....	....	....	....	3,10,053 0 0	....	3,10,053 0 0
GRAND TOTAL ..	1,19,99,669 0 0	6,38,678 1 6	4,42,610 4 11	4,53,685 0 3	2,35,648 7 0	2,35,648 7 0	1,36,29,642 6 8	1,19,000 0 0	1,34,10,642 6 8

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix No. 5.

EXPENDITURE.

STATEMENT showing the Actuals as compared with the Final Sanctioned Grants for 1912-13 as per Appendix No. 4, and the Actuals of the preceding year.

PARTICULARS.	Actuals for 1911-12.	Final Sanctioned Grants for Expenditure during 1912-13 as per Appendix No. 4.	Actuals for 1912-13.	As compared with the Final Sanctioned Grants as per column No. 3.		Amount proposed to be renewed in 1913-14 out of savings as per column No. 6.	Net Savings.	As compared with the Actuals for 1911-12 as per column No. 2.	
				More.	Less.			More.	Less.
1	2	3	4	5	6	7	8	9	10
GENERAL SUPERINTENDENCE—	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Corporation and Standing Committee's Establishment	69,650 10 0	76,970 13 4	76,496 15 3	....	473 14 1	....	473 14 1	6,846 5 3	....
Municipal Commissioner's Personal Office Establishment	59,815 2 0	63,718 0 0	63,249 1 9	....	466 14 3	....	466 14 3	3,433 15 9	....
General Office Establishment	78,742 6 7	1,40,203 7 8	86,198 11 4	....	54,004 12 4	31,189 0 0	22,815 12 4	7,456 4 9	....
Accounts and Expenditure Audit Establishment	85,392 5 7	93,654 1 4	88,580 0 8	....	5,074 0 8	4,447 3 10	626 12 10	3,187 11 1	....
	2,93,600 8 2	3,74,514 6 4	3,14,524 13 0	....	60,019 9 4	35,636 3 10	24,383 5 6	20,924 4 10	....
ASSESSMENT AND COLLECTION DEPARTMENT—									
Property and Wheel Tax Establishment	2,12,223 11 4	2,19,351 11 8	2,16,503 3 11	....	2,848 7 9	1,190 0 0	1,658 7 9	4,279 8 7	....
Town Duty Collection	97,898 3 3	1,21,395 0 5	1,19,462 13 11	....	1,932 2 6	943 12 9	988 5 9	21,464 10 8	....
Tolls Collection	636 2 7	570 0 0	536 13 8	....	33 2 4	.....	33 2 4	....	99 4 11
Licensing Establishment	21,012 4 7	23,309 6 1	21,706 15 7	....	1,603 6 6	33 6 2	1,570 0 4	693 11 0	....
Revenue and Refund Audit Establishment	48,338 7 6	50,234 0 0	42,296 12 8	....	7,937 3 4	165 10 8	7,771 9 1	38,963 5 2	....
	3,75,203 13 3	4,54,860 2 2	4,40,505 11 9	....	14,354 6 5	2,337 13 3	12,016 9 2	65,401 3 5	99 4 11
FIRE BRIGADE—									
Fire Brigade	1,74,706 3 9	3,38,606 2 11	3,20,025 15 9	....	18,580 3 2	6,577 8 0	12,002 11 2	1,45,319 12 0	....
	1,74,706 3 9	3,38,606 2 11	3,20,025 15 9	....	18,580 3 2	6,577 8 0	12,002 11 2	1,45,319 12 0	....
MAINTENANCE OF PUBLIC GARDENS—									
Victoria Gardens Maintenance ..	59,300 13 11	86,177 13 3	64,487 13 10	....	21,689 0 5	20,553 14 4	1,135 2 1	9,197 14 1	.....
Do. New Works ..	7,248 14 9	20,315 4 8	7,969 9 9	....	12,345 10 11	12,345 10 11	....	720 11 0	....
Elphinstone Circle Garden	991 11 7	2,250 0 0	1,643 7 11	....	606 8 1	421 3 5	179 4 8	657 12 4	....
Falkland Road Garden	180 1 3	656 0 0	386 11 2	....	269 4 10	21 6 4	247 14 6	205 9 11	....
Northbrook Garden	930 14 5	1,973 14 8	1,460 10 11	....	513 3 9	453 6 11	65 12 10	529 13 6	....
Sir C. Jehangir Mahim Garden ..	143 2 7	812 1 7	435 9 11	....	376 7 8	....	376 7 8	292 7 4	....
Bazaar Gate Street Garden	230 11 1	525 0 0	244 12 1	....	280 3 11	56 8 3	224 11 8	....	35 15 0
Dirk's Tank Garden	150 0 4	473 0 2	247 2 10	....	230 8 4	16 11 6	213 12 10	NI 7 6	....
Malabar Hill Garden	724 6 2	1,374 8 4	688 0 0	....	686 3 4	83 13 1	602 6 3	....	36 6 2
Esplanade Garden	5,040 14 0	5,909 0 0	4,897 2 8	....	1,011 13 6	49 9 6	962 4 0	....	143 11 6
Chowpati Bandstand	1,099 7 6	1,900 0 0	1,460 0 0	....	440 0 0	....	440 0 0	360 8 6	....
Flora and Wellington Fountains and the Queen's Statue	....	1,000 0 0	53 7 6	....	946 8 6	946 8 6	....	53 7 6	....
	76,091 1 7	1,22,277 5 8	83,981 12 5	....	38,295 9 3	34,947 12 9	4,347 12 6	3,106 11 6	216 0 8
PUBLIC WORKS (ENGINEER'S DEPARTMENT)—									
I. GENERAL SUPERVISION AND MISCELLANEOUS DUTIES ...	68,231 9 8	81,635 11 10	80,484 2 10	....	1,351 9 0	102 2 0	1,248 7 0	22,252 9 2	....
II. MECHANICAL BRANCH—									
Maintenance of Compressor Station, Colaba (Shone System)	33,496 6 2	34,840 0 0	34,156 11 4	....	683 4 8	....	683 4 8	660 5 2	....
Maintenance of Love Grove Pumping Station	1,09,830 4 6	1,43,920 0 0	1,43,354 14 10	....	565 1 2	263 0 0	302 1 2	33,404 10 10	....
Maintenance of Air Compressor Station at Love Grove (Shone System)	76,961 6 11	77,911 0 0	75,922 14 4	....	1,988 1 8	99 0 0	1,898 1 8	971 7 5	....
Maintenance of Storm Water Sluices	2,071 10 2	2,594 0 0	1,675 3 0	....	918 13 0	152 0 0	766 13 0	....	396 7 2
III. SANITARY-DISPOSAL OF TOWN SWEEPINGS	1,11,163 11 0	1,08,416 5 2	1,02,135 7 3	....	6,280 13 11	1,299 2 3	4,981 11 8	....	9,028 3 9
IV. DRAINAGE—									
A. Miscellaneous Drainage ..	2,37,443 15 3	2,72,291 8 1	2,49,842 9 11	....	22,448 14 2	7,863 0 0	14,585 14 2	12,398 10 8	....
B. Maintenance of Sluices ..	2,793 10 17	3,294 0 0	2,803 2 0	....	490 7 0	....	490 7 0	9 14 17	....
V. WATER WORKS	3,00,020 7 8	4,89,505 1 6	3,33,406 13 0	....	1,56,098 4 6	91,515 15 4	64,584 5 2	33,386 5 4	....
VI. STREETS AND BUILDINGS—									
A. Inspection and Supervision ..	1,76,048 13 8	1,81,946 1 6	1,81,068 11 8	....	3,577 5 10	700 0 0	2,877 5 10	5,019 14 0	....
B. Public Lighting	3,86,905 13 5	4,61,468 10 7	3,92,563 15 11	....	68,904 10 8	33,050 0 0	35,854 10 8	5,658 2 6	....
C. Road Watering	74,902 8 2	1,03,745 0 1	80,915 1 9	....	22,829 14 4	15,655 6 10	7,174 7 6	6,012 9 7	....
C1. Oiling and Tarring Roads and treating Roads with Westrumite (Experimental) ..	37,160 11 5	99,786 10 11	44,820 6 8	....	54,966 4 3	54,966 4 3	....	7,719 11 3	....
D. Roads, Footpaths, &c. ..	4,93,619 6 1	5,89,597 1 10	4,86,746 3 4	....	90,850 14 6	70,885 3 6	20,265 11 0	....	6,873 2 9
E. Street Improvements ..	1,19,242 13 9	1,38,390 2 8	1,15,759 9 2	....	22,630 9 1	22,230 9 1	.....	....	3,483 4 7
F. Miscellaneous (compensation to house-owners for Insanitary Buildings demolished) ..	66 14 0	4,250 0 0	2,357 8 7	....	1,892 7 5	400 0 0	1,492 7 5	2,290 10 7	....
VII. CLEANING, LIGHTING AND REPAIRING PORT TRUST WHARVES, ROADS, &c. ..	40,183 0 0	40,183 0 0	40,183 0 0	....	....	....	....	....	....
	22,69,793 1 5	28,17,674 5 9	23,70,496 14 7	....	4,47,177 7 2	2,59,871 11 2	1,87,305 11 11	1,20,484 15 5	19,781 2 3
Carried over Rs. ..	31,89,394 12 2	41,03,962 6 10	35,29,538 3 6	....	5,79,427 3 4	3,39,371 1 0	2,40,056 2 4	3,60,236 15 2	20,096 7 10

Appendix No. 5—*continued.*

Particulars.	Actuals for 1911-12.	Final Sanctioned Grants for Expenditure during 1912-13 as per Appendix No. 4.	Actuals for 1912-13.	As compared with the Final Sanctioned Grants as per column No. 3.		Amount proposed to be renewed in 1913-14 out of savings as per column No. 6.	Net Savings.	As compared with the Actuals for 1911-12 as per column No. 2.	
				More.	Less.			More.	Less.
1	2	3	4	5	6	7	8	9	10
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ..Rs.	31,89,894 12 2	41,08,962 6 10	35,29,535 3 6	....	5,79,427 3 4	3,39,371 1 0	2,40,056 2 4	3,60,236 15 2	20,096 7 10
New Works	2,23,178 7 4	4,60,322 4 2	1,88,814 12 3	....	2,71,507 7 11	2,37,907 2 4	33,600 5 7	....	34,363 11 1
	2,23,178 7 4	4,60,322 4 2	1,88,814 12 3	....	2,71,507 7 11	2,37,907 2 4	33,600 5 7	....	34,363 11 1
Public Health Department—									
General Supervision	1,36,654 5 7	1,38,549 10 6	1,36,691 1 4	....	1,858 9 2	752 14 3	1,105 10 11	36 11 9	....
Conservancy Branch	16,21,319 15 4	18,19,578 0 1	16,98,892 1 4	....	1,22,685 14 9	91,071 12 6	31,614 2 9	76,572 2 0	....
Markets and Slaughter Houses ..	1,70,803 11 10	2,23,809 7 11	1,89,506 5 6	....	34,303 2 5	20,270 8 0	14,032 10 5	18,702 9 8	....
Registration of Births and Deaths	79,963 15 9	83,891 5 3	81,199 5 8	....	2,691 15 7	50 0 0	2,641 15 7	1,235 5 11	....
Cemeteries	14,419 2 2	16,134 4 4	12,158 8 5	....	3,975 11 11	1,260 10 2	2,715 1 9	....	2,260 9 9
Mahalaxmi Dhobiwada	16,122 0 1	17,221 14 4	15,707 3 1	....	1,514 11 3	357 0 0	1,157 11 3	....	414 13 0
Milch Cattle Stables and Rooms ..	5,832 3 7	8,067 6 5	6,176 6 7	....	1,890 15 10	280 7 2	1,610 8 8	314 3 0	....
Rustomjee Jamsedjee Dharamshalla	515 14 6	1,055 10 11	779 9 4	....	276 1 7	200 0 0	76 1 7	263 10 10	....
Laboratory	11,392 12 0	19,427 15 0	15,835 6 10	....	3,592 8 2	3,346 4 8	246 3 11	4,442 10 10	....
Infectious Diseases	44,833 1 8	70,884 10 11	65,899 0 10	....	4,985 10 1	2,385 1 4	2,600 8 9	18,065 15 2	....
Vaccination	27,207 8 4	29,588 0 0	26,732 5 3	....	2,855 10 9	270 6 3	2,585 4 6	....	475 3 1
Malaria..	9,101 4 2	60,000 0 0	50,083 13 1	....	9,916 2 11	2,355 13 2	7,560 5 9	40,982 8 11	....
Dispensaries	11,507 9 1	14,899 0 0	13,734 7 2	....	964 8 10	483 3 0	481 5 10	2,226 14 1	....
	21,54,673 8 1	25,02,907 5 8	23,11,395 10 5	....	1,91,511 11 3	1,23,083 15 7	68,427 11 8	1,59,872 12 2	3,150 9 10
General Stores Establishment—									
General Stores Establishment ..	33,054 2 10	40,502 4 9	34,069 7 8	....	6,432 13 1	4,254 0 10	2,178 12 3	1,015 4 10	....
	33,054 2 10	40,502 4 9	34,069 7 8	....	6,432 13 1	4,254 0 10	2,178 12 3	1,015 4 10	....
Census	Cr. 2,540 3 8	4,145 6 0	4,145 3 0	....	0 3 0	....	0 3 0	6,685 6 8	....
Education—									
Primary Education	3,37,257 0 0	3,37,257 0 0	3,37,257 0 0	....	....	....	....	....	....
School for Deaf and Dumb Mutes..	3,000 0 0	3,000 0 0	3,000 0 0	....	....	....	....	....	....
Veterinary College	2,500 0 0	2,500 0 0	2,500 0 0	....	....	....	....	....	....
Victoria and Albert Museum ..	17,297 3 7	17,572 3 7	15,269 0 3	....	2,303 3 4	2,069 11 3	233 8 1	....	2,028 3 4
Victoria Jubilee Technical Institute	20,000 0 0	20,000 0 0	20,000 0 0	....	....	....	....	....	....
Prince of Wales Museum	25,000 0 0	25,000 0 0	25,000 0 0	....	....	....	....	....	....
Joint School Committee's Establishment	12,757 0 0	13,183 10 10	12,935 5 0	....	198 5 10	....	198 5 10	228 5 0	....
Victoria Memorial School	2,500 0 0	2,500 0 0	2,500 0 0	....	....	....	....	....	....
	4,20,311 3 7	4,21,012 14 5	4,18,511 5 3	....	2,501 9 2	2,069 11 3	431 13 11	228 5 0	2,028 3 4
Hospitals—									
Lepers' Asylum at Matunga ..	42,350 0 0	28,000 0 0	26,160 0 0	....	1,840 0 0	....	1,840 0 0	....	16,190 0 0
Medical Institutions	4,14,500 0 0	4,14,500 0 0	4,14,500 0 0	....	....	....	....	....	....
Adams-Wylie Hospital	3,000 0 0	4,000 0 0	4,000 0 0	....	....	....	....	1,000 0 0	....
Bombay Sanitary Association ..	1,500 0 0	1,500 0 0	1,500 0 0	....	....	....	....	....	....
	4,61,350 0 0	4,48,000 0 0	4,46,160 0 0	....	1,840 0 0	....	1,840 0 0	1,000 0 0	16,190 0 0
Carried over Rs. ..	64,79,421 14 4	79,85,852 9 10	69,32,631 10 1	....	10,53,220 15 9	7,06,685 15 0	3,46,535 0 9	5,29,638 11 10	75,829 0 1

Appendix No. 5—*concluded.*

Particulars.	Actuals for 1911-12.	Final Sanctioned Grants for expenditure during 1912-13 as per Appendix No. 4.	Actuals for 1912-13.	As compared with the Final Sanctioned Grants as per column No. 3.		Amount proposed to be renewed in 1913-14 out of savings as per column No. 6.	Net Savings.	As compared with the Actuals for 1911-12 as per column No. 2.	
				More.	Less.			More.	Less.
1	2	3	4	5	6	7	8	9	10
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward Rs. ..	64,79,421 14 4	79,85,852 2 10	69,32,681 10 1	....	10,53,220 15 9	7,08,685 15 0	3,46,535 0 9	5,29,038 13 10	75,829 0 1
MISCELLANEOUS:—									
Pensions, Gratuities and Compassionate Allowances	96,701 0 0	1,05,562 15 0	96,913 7 7	....	8,649 7 5	8,649 7 5	....	10,212 7 7	....
Discretional Contingencies ..	7,269 6 3	9,276 8 3	4,014 4 9	....	5,262 3 6	1,100 0 0	4,162 3 6	....	3,246 1 6
Auditors' Allowance	10,000 0 0	10,000 0 0	10,000 0 0	....	....	....	....	....	....
Loss on account of Private Works irrecoverable bills written off ..	95 5 2	297 6 0	297 6 0	....	....	....	....	172 0 10	....
House rent	2,563 11 3	73 4 9	Cr. 4 10 2	....	77 15 1	....	77 15 1	....	2,563 5 7
Cost of preparing the address of Welcome to their Imperial Majesties	18,256 10 0	....	....	....	....	....	....	....	18,256 10 0
Cost of providing permanent flag staffs on Municipal Office Buildings, &c.	1,237 9 2	447 10 10	....	....	447 10 10	....	447 10 10	....	1,237 9 2
Grain Compensation	....	1,58,235 6 4	1,12,783 9 6	....	46,041 12 10	950 0 0	45,091 12 10	1,12,783 9 6	....
Local Allowance	54,446 1 3	60,150 0 0	55,692 12 4	....	4,457 3 8	300 0 0	4,157 3 8	1,246 11 1	....
Writing off the difference between the price paid by the Municipality for the property at the junction of Mody Street and Agiary Lane Fort and the amount realized by its sale ..	411 14 9	....	....	....	....	....	....	....	411 14 9
Cost of caskets and addresses presented to Lord Sydenham the retiring Governor and to Lord Willingdon the Governor Designate	....	2,250 0 0	750 11 0	....	1,499 5 0	1,499 5 0	....	750 11 0	....
Contribution for the 1st year towards the expenses of King George V Anti-tuberculosis League..	....	10,000 0 0	10,000 0 0	....	....	....	....	10,000 0 0	....
Charges in connection with the illumination of the Municipal Office Buildings, &c., during Royal Visit	....	29,800 0 0	29,714 10 1	....	85 5 11	....	85 5 11	29,714 10 1	....
Loss written off on account of deficiency in the stock at the Reliance Bridge Pipe Depôt ..	....	1,538 2 6	1,538 2 6	....	....	....	....	1,538 2 6	....
Refund of a portion of the amount recovered for the right of collecting fees at the scale shed at A. C. Market	....	1,000 0 0	1,000 0 0	....	....	....	....	1,000 0 0	....
Compensation to a Victoria Driver in respect of his claim for damage caused to his carriage ..	....	125 0 0	125 0 0	....	....	....	....	125 0 0	....
Contribution towards the building to be erected at the Apollo Bunder to commemorate the visit of His Majesty the King Emperor of India	....	1,00,000 0 0	....	....	1,00,000 0 0	1,00,000 0 0	....	....	....
	1,81,974 9 10	4,89,316 5 8	3,22,725 5 8	....	1,66,521 0 2	1,12,498 12 8	54,022 3 10	1,07,548 4 7	26,722 9 0
CONTRIBUTION TO THE CITY IMPROVEMENT TRUST	8,65,000 0 0	9,25,000 0 0	9,25,000 0 0	....	....	....	....	60,000 0 0	....
PLAGUE EXPENSES	1,55,903 0 0	1,52,518 9 8	1,47,763 0 2	....	4,755 9 6	4,755 9 6	....	....	8,139 15 10
MUNICIPAL DEBT—									
Interest on Loans	25,16,054 1 11	27,57,708 10 0	25,95,767 6 5	....	1,61,941 3 7	1,61,016 2 1	925 1 6	79,713 4 6	....
Charges on Loans	11,556 0 7	12,146 2 2	12,021 10 11	....	124 7 3	....	124 7 3	465 10 4	....
Payment towards the reduction of Debt	1,27,399 12 11	1,51,330 9 0	1,18,830 9 0	....	33,000 0 0	33,000 0 0	....	....	8,569 3 11
Payment towards the investment of Sinking Fund	6,18,351 2 4	6,16,216 8 4	6,16,777 8 4	561 0 0	....	....	+ 561 0 0	....	1,573 10 0
	33,73,361 1 9	35,37,901 13 6	33,43,397 2 8	561 0 0	1,95,065 10 10	1,94,016 2 1	689 8 9	80,178 14 10	10,142 13 11
INVESTMENTS—									
Municipal Buildings Fire Insurance Fund	10,000 0 0	10,000 0 0	10,000 0 0	....	....	....	....	....	....
	1,09,35,660 9 11	1,31,00,589 6 8	1,16,81,387 2 4	561 0 0	14,19,563 4 4	10,17,956 7 0	4,01,945 13 4	2,36,760 15 3	1,20,634 6 10
Adjustment (part) of the advance of Rs. 9,10,022-7-4 outstanding under "Plague Expenditure Suspense Adjustment Account" ..	5,00,000 0 0	3,10,053 0 0	3,10,053 7 4	....	0 8 8	....	0 8 8	....	1,89,947 8 8
GRAND TOTAL RS. ..	1,14,65,660 9 11	1,34,10,642 6 8	1,19,91,439 9 8	561 0	14,19,563 13 0	10,17,956 7 0	4,01,946 6 0	2,36,760 15 3	3,10,581 15 6
				Less ..	561 0 0		Less ..	2,10,781 15 6	
				Net Balance..	14,19,002 13 0		Net Increase..	5,25,978 15 9	

* Excludes Rs. 4,88,901-1-0 on account of investments of interest realized on Sinking and Special Funds and Rs. 30,000 on account of premia received on the 1st Instalment of Rs. 30 lakhs of the 55 lakhs Loan.

R. PEEL,

Acting Chief Accountant.

J. CREERAR,

Municipal Commissioner.

Appendix

SURPLUS

DR. STATEMENT showing the state of the Surplus Cash

To	Rs. a. p.	Rs. a. p.
Sums Payable—		
Deposits, &c., in cash	6,03,620 7 8	
Do. on account of Contractors' Government Paper kept in office ...	73,200 0 0	
Bank of Bombay on account of Contractors' Securities held under objection	100 0 0	
Paper Deposits from Municipal employés and Contractors pending submission to the Bank of Bombay (kept in office)	24,000 0 0	
Government of Bombay on account of Income Tax	371 13 11	
Cheques payable	2,48,953 3 10	
Loan Works Establishment	17,369 15 8	
Contribution from Government towards the cost of Primary School Buildings	69,572 1 8	
		10,37,687 10 4
Reserve Stock per Contra	.....	4,50267 6 7
Amount to be renewed in 1913-1914 for unpaid charges for and prior to 1912-1913	.....	10,17,956 7 0
Reserve Stock Purchases	62,385 11 8	
Stock adjustment account	5,839 6 5	
		68,225 2 1
		25,74,136 10 0
Balance at the close of the year 1912-1913—		
Minimum Cash Balance required by the Act	1,00,000 0 0	
Amount reserved for payment to the C. I. Trust on account of contribution from revenues earmarked for the purpose during the year	9,25,000 0 0	
SURPLUS CASH BALANCE	25,86,620 3 11	
		36,11,620 3 11
	Total Rs. ...	61,85,756 13 11

R. PEEL,

Acting Chief Accountant.

No. 6.

CASH BALANCE.

Balance at the close of the year 1912-1913. Cr.

By			Rs. a. p.	Rs. a. p.
Cash Deposits and Investments—				
Cash balance in the Office and Bank Treasuries			4,51,933 5 7	
Surplus Funds investments			37,98,940 2 5	
				42,50,873 8 0
Advances—				
To Loan Works—				
Expenditure on Loan Works as per Appendix No. 6 A attached, including Plague expenses up to 1903-1904			5,35,19,974 1 2	
Less—				
Amount drawn from Loan Funds as per Appendix No. 6 A attached ...			5,35,19,974 1 2	
To Municipal Officers, &c....			31,113 7 4	
Miscellaneous Advances			51,951 8 0	
To private and Departmental Works including Workshops			63,096 8 3	
To printing and stamping, building and repair certificates and water application forms			47 6 0	
To Contractors			26,426 15 8	
To Chief Auditor and Accountant, G. I. P. Railway...			35,867 0 0	
New Works to be subsequently provided for under a new loan to be raised			12,60,838 6 9	
To Chief Auditor and Accountant, B. B. & C. I. Railway			675 0 0	
				14,69,516 4 9
Reserve Stock—				
Serviceable Stores—	Rs. a. p.			
Stock	3,01,553 0 8			
Water Works Imprest	3,283 8 5			
		3,04,836 9 1		
Executive Engineer (General)		2,164 14 0		
Line Suspense account		1,16,397 8 9		
		4,23,398 15 10		
Surplus and obsolete stores		26,868 6 9		
				4,50,267 6 7
Sales (Stores)				15,094 11 4
			Total Rs. ...	61,85,756 13 11

J. CREAR,

Municipal Commissioner.

Appendix No. 6-A.

STATEMENT showing (1) the Amount of Loans raised, (2) the Expenditure on Loan Works, and (3) the Invested Balance on 31st March 1913.

	Amount of Loan raised.	Amount expended.
	Rs.	Rs. a. p.
DRAINAGE AND WATER WORKS (Rs. 26,94,000) LOAN OF 1878—		
Drainage, 1st Section	26,94,000	16,52,449 12 9
Water Works (Bhandarwada)		10,16,830 13 3
	26,94,000	26,69,280 10 0
SURFACE DRAINAGE WORKS	6,00,000	6,00,000 0 0
SANITARY WORKS (44 LAKHS) LOAN—		
Surface Drainage Works (Rs. 18,22,134-3-3—Rs. 6,00,000)... ...	44,00,000	7,22,134 3 3
Drainage (1883-84)...		10,74,951 2 0 (b)
Do. (1884)		4,01,080 11 5
Ripon Road		1,41,500 1 2
Other Sanitary Works		87,110 9 6
Water Works		18,95,947 12 0
	44,00,000	43,22,724 7 4
SANITARY WORKS (7 LAKHS) LOAN—		
Fort Drainage, &c.	7,00,000	4,62,337 0 0
Water Works		1,42,241 5 4
	7,00,000	6,04,578 5 4
DRAINAGE AND WATER WORKS (12 LAKHS) LOAN—		
Queen's Road Sewerage, &c.	12,00,000	9,01,437 8 2
Water Works (Frere Road, Main)		80,031 5 0
	12,00,000	9,81,468 8 2
MISCELLANEOUS WORKS (10,08,500) LOAN—		
Drainage Works	10,08,500	58,396 14 10
Cross Road at Mahaluxmi Station		19,594 4 8
Nowrojee Hill Road		70,089 2 0
Markets (Erskine Road, &c.)		4,86,906 2 8
Water Works		1,16,214 8 2
	10,08,500	7,51,190 11 4
HOUSE SULLAGE WATER CONNECTIONS, AGRIPADA (Rs. 2,48,000) LOAN	2,48,000	2,33,533 12 10
VARIOUS SANITARY WORKS (35 LAKHS) LOAN—		
Drainage	35,00,000	13,864 7 3
New Roads at Agripada and elsewhere		15,26,679 2 9
Bhuleshwar Market Extension and Foras Road Market		3,72,835 15 1
Other Works		4,11,271 5 9
Water Works		8,72,574 9 10
	35,00,000	31,97,225 8 8
TANSA WATER WORKS (147 LAKHS) LOAN...	1,47,00,000	1,46,96,388 7 0 (d)
MUNICIPAL BUILDING (INCLUDING FURNITURE, &c.) (8 LAKHS) LOAN.	8,00,000	7,33,060 3 0 (c)
FIRE BRIGADE QUARTERS, &C. (4½ LAKHS) LOAN	4,50,000	4,03,320 6 1
23¼ LAKHS DRAINAGE, WATER WORKS, ROADS AND OTHER WORKS LOAN—		
Drainage	23,25,000	17,44,602 15 5
Falkland Road Overbridge		15,082 9 4
Wari Bunder Bridge		1,32,652 0 0
Other Works		5,890 14 1
Water Works		1,49,522 5 7
	23,25,000	20,47,750 12 5
Carried over Rs. ...	2,26,25,500	3,12,40,526 12 2

(a) Including Rs. 1,94,031-13-3 written off in 1902-03 on account of properties not then existing.

(b) Do. Rs. 98,438-1-9 do. do. do. do.

(c) Excluding Rs. 7,34,326-3-3 paid out of the Invested Fund.

(d) Excluding Rs. 2,40,000 paid out of the premia received on the loan.

No. 6-A—*concluded.*

	Amount of Loans raised.	Amount expended.
	Rs.	Rs a. p.
Brought Forward Rs. ...	3,26,25,500	3,12,40,526 12 2
15¾ Lakhs Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works Loan—		
Drainage		5,69,977 1 0
Wari Bunder and Victoria Roads, *less* Rs. 1,56,500 contributed by the Port Trust for Wari Bunder Road	15,75,000	1,69,813 9 2
Burial Ground		2,11,652 4 5
Water Works		12,842 13 10
	15,75,000	9,63,285 12 5
25 Lakhs Loan for Sewerage, &c., Works—		
Drainage		11,25,083 14 4
Water Works	25,00,000	2,04,268 6 8
Disposal of Town Sweepings and Land for Burial Ground ...		11,33,264 0 0
	25,00,000	24,62,616 5 0
19½ Lakhs Loan for Sewerage, Roads, &c., Works—		
Drainage	19,25,000	14,53,566 3 4
Miscellaneous Works		1,03,085 15 6
	19,25,000	15,56,652 2 10
24¾ Lakhs Loan for Sewerage and Water Works—		
Drainage	24,75,000	16,30,484 13 10
Water Works		2,54,146 7 11
	24,75,000	18,84,631 5 9
12¾ Lakhs Loan for Water Works—		
Water Works	12,75,000	9,53,238 1 11
2nd 24¾ Lakhs Loan for certain Sewerage Works	24,75,000	7,64,426 14 3
13½ Lakhs Loan for various Sanitary, &c., Works—		
Health Department Chawls and Stables	13,50,000	8,52,509 4 8
15 Lakhs Loan for Street Improvement in different places.	15,00,000	15,00,000 0 0
30 Lakhs Loan—For acquisition of sites for construction of various Overbridges	30,00,000	18,70,772 8 7
55 Lakhs Loan for Miscellaneous Works—		
Roads, &c.		1,62,659 15 8
Drainage	30,00,000	19,49,108 4 5
Water Works		2,31,778 0 8
Miscellaneous		6,56,458 11 3
	30,00,000	30,00,000 0 0
Executed out of Savings on Different Loans—		
Drainage	.....	10,25,797 4 8
Water Works	.....	6,85,579 13 1
Markets	.....	1,09,262 14 8
Roads, &c.	.....	92,355 8 4
Street Improvements in different places	.....	2,40,000 0 0
Miscellaneous Works	.....	4,05,947 9 6
	.....	25,58,943 2 3
Advances from Surplus Balances—		
Drainage	.....	7,67,396 14 0
Water Works	.....	1,95,684 8 9
Roads and Overbridges	.....	6,43,626 13 1
Other Works	.....	2,00,563 7 11
Balance of advance for Plague	.....	1,00,000 0 0
	.....	19,07,271 11 9
Loan for Plague Expenses—		
Plague Expenses incurred from 1896-97 to 1903-04 (deducting Rs. 14¼ lakhs met from the Government Contribution, Rs. 16 Lakhs received from the City Improvement Trust now adjusted against this head)	20,00,000	20,00,000 0 0
Grand Total ... Rs.	5,57,00,500 (*a*)	5,35,19,974 1 2 (*b*)

	Rs. a. p.
(*a*) Amount of Loans raised	5,57,00,500 0 0
(*b*) Do. expended	5,35,19,974 1 2
Invested Balance (*vide* Statement 10, page 87)	21,80,525 14 10

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing (1) the various Municipal Loans and their Amounts, (2) the unutilized Balances to meet the cost of New Works, &c.,

Serial No.	NAME OF THE LOAN.	Amount raised.	Transferred to meet the cost of new works provided out of Savings on different Loans.
	1	2	3
		Rs.	Rs. a. p.
1	Drainage Loan of 1878	26,94,000	—24,719 6 0
2	Surface Drainage Works	6,00,000	.....
3	Sanitary Works Loan (44 lakhs)	44,00,000	—77,275 8 8
4	Tansa Water Works (147 lakhs)	1,47,00,000	—3,616 9 0
5	Sanitary Works Loan of 1887-88	7,00,000	—95,421 10 8
6	Sewerage Works and Water Supply Improvement (12 lakhs).	12,00,000	—2,16,531 7 10
7	Markets and other Miscellaneous Works (Rs. 10,08,500).	10,08,500	—2,57,299 4 8
8	House Sullage Water Connections, Agripada	2,48,000	—14,466 3 2
9	Various Sanitary Works (35 lakhs)	35,00,000	—3,02,774 7 4
10	New Municipal Office building (8 lakhs)	8,00,000	—66,939 13 0
11	Fire Brigade Quarters and Stations (14½ lakhs)	4,50,000	—46,679 9 11
12	Drainage Water Works, Roads and other works (23¼ lakhs).	23,25,000	—2,77,249 3 7
13	Sewerage, Wari Bunder, &c., Roads, Burial-ground and certain Water Works (15¾ lakhs).	15,75,000	—3,09,684 2 5
14	Sewerage Water and other Sanitary Works (25 lakhs) ...	25,00,000	—34,853 4 10
15	Plague Charges (20 lakhs)	20,00,000	.....
16	Sewerage, Roads and other Sanitary Works (19¼ lakhs)..	19,25,000	—2,06,961 12 8
17	Sewerage and Water Works (24¾ lakhs)	24,75,000	—3,76,720 12 11
18	Certain Water Works (12¾ lakhs)	12,75,000	—74,841 14 7
19	Sewerage Works (2nd 24¾ lakhs)	24,75,000	—1,04,904 4 8
20	Construction of Quarters for Halalcores and Bigaries (13½ lakhs).	13,50,000	.....
21	Street Improvements (15 lakhs)	15,00,000	.....
22	Acquisition of Sites for the construction of various Over-bridges in the City (30 lakhs).	30,00,000	.....
23	Miscellaneous Works (55 lakhs)	30,00,000	.....
		5,57,00,500	—24,92,939 7 11
	Transfers made to provide for Works under Savings .	.....	—2,35,347 1 11
		5,57,00,500	—27,28,286 9 10
24	Works executed out of Savings on different Loans ...	.....	.....
	Total Rs. ...	.....	.....

R. PEEL,

Acting Chief Accountant.

No. 6-B.

Expenditure incurred against each of them, (3) the Amounts withdrawn temporarily from their (4) invested Balances of the Loans on 31st March 1913.

Net Amount available.	Amount expended on works proper up to 31st March 1913.	Balance on 1st April 1913.	Amount advanced to meet the cost of Plague and sanctioned new works, &c., for which loans are yet to be raised.	Balances invested.
4	5	6	7	8
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
25,69,280 10 0	26,69,280 10 0	.....	.....	.....
6,00,000 0 0	6,00,000 0 0	.....	.....	.....
43,22,724 7 4	43,22,724 7 4	.....	.....	.....
1,46,96,383 7 0	1,46,96,383 7 0	.....	.....	.....
6,04,578 5 4	6,04,578 5 4	.....	.....	.....
9,81,468 8 2	9,81,468 8 2	.....	.....	.....
7,51,200 11 4	7,51,200 11 4	.....	.....	.....
2,33,533 12 10	2,33,533 12 10	.....	.....	.....
31,97,225 8 8	31,97,225 8 8	.....	.....	.....
7,33,060 3 0	7,33,060 3 0	.....	.....	.....
4,03,320 6 1	4,03,320 6 1	.....	.....	.....
20,47,750 12 5	20,47,750 12 5	.....	.....	.....
12,65,315 13 7	9,63,385 12 5	3,01,930 1 2	3,01,930 1 2	.....
24,65,146 11 2	24,62,616 5 0	2,530 6 2	2,530 6 2	.....
20,00,000 0 0	20,00,000 0 0	.....	.....	.....
17,18,038 3 4	15,56,652 2 10	1,61,386 0 6	1,61,386 0 6	.....
20,98,279 3 1	18,84,631 5 9	2,13,647 13 4	2,13,647 13 4	.....
12,00,158 1 5	9,58,238 1 11	2,41,919 15 6	2,41,919 15 6	.....
23,70,095 11 4	7,64,426 14 3	16,05,668 13 1	9,85,857 7 1	6,19,811 6 0
13,50,000 0 0	8,52,509 4 3	4,97,490 11 9	.....	4,97,490 11 9
15,00,000 0 0	15,00,000 0 0	.....	.....	.....
30,00,000 0 0	18,70,772 8 7	11,29,227 7 5	.....	11,29,227 7 5
30,00,000 0 0	30,00,000 0 0	.....	.....	.....
5,32,07,560 8 1	4,90,53,759 2	41,53,801 4 11	19,07,271 11 9	22,46,529 9 2
—2,35,347 1 11	.....	—2,35,347 1 11	.....	—2,35,347 1 11
5,29,72,213 6 2	4,90,53,759 3 2	39,18,454 3 0	19,07,271 11 9	20,11,182 7 3
27,28,286 9 10	25,58,943 2 3	1,69,343 7 7	.....	1,69,343 7 7
5,57,00,500 0 0	5,16,12,702 5 5	40,87,797 10 7	19,07,271 11 9	21,80,525 14 10

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT of Outstanding Loans due by the Municipality and

	Particulars of Loans.	Rate of Interest.	Balance due on 1st April 1912.	Amount raised in 1912-13.	Total.	Amount re-paid in 1912-13.	Balance due on 31st March 1913.
	1	2	3	4	5	6	7
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
	Loan raised from Government.						
1	Vehar Water Works Debt.	4 per cent. ...	22,89,246 12 9	.....	22,89,246 12 9	22,830 9 0	22,66,416 3 9
	Loans raised from the Public.						
2	Drainage Loan of 1878 (Rs. 26,94,000)	5 per cent. ...	9,26,000 0 0	.....	9,26,000 0 0	(a) 96,000 0 0	8,30,000 0 0
3	The Sanitary Works Loan of 1885-86 (Rs. 44 Lakhs)	5 per cent. ...	37,39,000 0 0	.....	37,39,000 0 0	(b)	37,39,000 0 0
4	The Sanitary Works Loan of 1888 (Rs. 7 Lakhs)	5 per cent. ...	7,00,000 0 0	.....	7,00,000 0 0	(b)	7,00,000 0 0
5	The Tansa Water Works Loan (Rs. 147 Lakhs)	5 per cent. ...	1,47,00,000 0 0	.....	1,47,00,000 0 0	(b)	1,47,00,000 0 0
6	The Drainage and Water Works Loan of 1888 (Rs. 12 Lakhs) ...	5 per cent. ...	12,00,000 0 0	.....	12,00,000 0 0	(b)	12,00,000 0 0
7	The Miscellaneous Works Loan of 1888-89 for Drainage and Water Works, Markets and Roads (Rs. 10,08,500)	5 per cent. ...	10,08,500 0 0	.....	10,08,500 0 0	(b)	10,08,500 0 0
8	The Agripada House Sullage Water Connections Loan of 1889-90 of Rs. 2,48,000	5 per cent. ...	2,48,000 0 0	.....	2,48,000 0 0	(b)	2,48,000 0 0
9	The 35 Lakhs various Sanitary Works Loan of 1890-91	5 per cent. ...	35,00,000 0 0	.....	35,00,000 0 0	(b)	35,00,000 0 0
10	The Municipal Office Building Loan of 1891 (Rs. 8 Lakhs)	5 per cent. ...	8,00,000 0 0	.....	8,00,000 0 0	(b)	8,00,000 0 0
11	The Loan of 4½ Lakhs for Fire Brigade Quarters and Stations ...	4 per cent. ...	4,50,000 0 0	.....	4,50,000 0 0	(b)	4,50,000 0 0
12	The Loan of 42 Lakhs for repayment of the Balance of the 4½ per cent. Government Consolidated Loan	4 per cent. ...	42,00,000 0 0	.....	42,00,000 0 0	(b)	42,00,000 0 0
13	The Loan of 23¾ Lakhs for Drainage and other Works	4 per cent. ...	23,25,000 0 0	.....	23,25,000 0 0	(b)	23,25,000 0 0
14	The Loan of 15¾ Lakhs for Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works (1st instalment of Rs. 10 Lakhs)	3½ per cent. ...	15,75,000 0 0	.....	15,75,000 0 0	(b)	15,75,000 0 0
	Do. do. (2nd instalment of Rs. 5¾ Lakhs)...	4 per cent. ...					
15	25 Lakhs Loan for Sewerage, Water and other Sanitary Works ...	4 per cent. ...	25,00,000 0 0	.....	25,00,000 0 0	(b)	25,00,000 0 0
16	20 Lakhs Loan for Plague purposes..	4 per cent. ...	20,00,000 0 0	.....	20,00,000 0 0	(b)	20,00,000 0 0
17	19¼ Lakhs Loan for Sewerage, Roads and other Sanitary Works..	4 per cent. ...	19,25,000 0 0	.....	19,25,000 0 0	(b)	19,25,000 0 0
18	24¾ Lakhs Loan for certain Sewerage and Water Works	4 per cent. ...	24,75,000 0 0	.....	24,75,000 0 0	(b)	24,75,000 0 0
19	12 Lakhs Loan for certain Water Works	4 per cent. ...	12,75,000 0 0	.....	12,75,000 0 0	(b)	12,75,000 0 0
20	The 2nd 24¾ Lakhs Loan for certain Sewerage Works	4 per cent. ...	24,75,000 0 0	.....	24,75,000 0 0	(b)	24,75,000 0 0
21	13½ Lakhs Loan for the construction of quarters for Halalkhores and Biggaries	4 per cent. ...	13,50,000 0 0	.....	13,50,000 0 0	(b)	13,50,000 0 0
22	The 15 Lakhs Loan for Street Improvements	4 per cent. ...	15,00,000 0 0	.....	15,00,000 0 0	(b)	15,00,000 0 0
23	The 30 Lakhs Loan for the Acquisition of sites for the construction of different Overbridges in the City	4 per cent. ...	30,00,000 0 0	.....	30,00,000 0 0	(b)	30,00,000 0 0
24	1st Instalment of Rs. 30 Lakhs of the 55 Lakhs Loan for Miscellaneous Works...	4 per cent. ...	30,00,000 0 0	.....	30,00,000 0 0	.....	30,00,000 0 0
	Total of Loans raised from the Public ...	Rs. ...	5,68,71,500 0 0	.....	5,68,71,500 0 0	96,000 0 0	5,67,75,500 0 0
	GRAND TOTAL ...	Rs. ...	5,91,60,746 12 9	.....	5,91,60,746 12 9	1,18,830 9 0	5,90,41,916 3 9

R. PEEL,

Acting Chief Accountant.

No. 7.

the sums set aside as Sinking Fund at 31st March 1913.

Interest paid in 1912-13.	Total of columns Nos. 6 and 8.	REMARKS.
8	9	
Rs. a. p.	Rs. a. p.	
91,145 7 0	1,13,976 0 0	(a) The amount stipulated to be paid off on 1st January 1913 was Rs. 1,11,500, which together with unpaid debentures aggregating Rs. 17,500 for the preceding years, aggregated Rs. 1,29,000 against which the debentures actually surrendered for payment up to 31st March 1913, amounted to Rs. 96,000. The unpaid balance thus amounts to Rs. 33,000 which is represented by the following debentures :— No. 2368 for Rs. 500 repayable on 1st January 1906 and Nos. 2780 to 2788, 2804 to 2815 for Rs. 500 each, repayable on 1st January 1909 and No. 2984 repayable on 1st January 1910, and Nos. 3386, 3416, repayable on 1st January 1912, and Nos. 3583 to 3592, 3610, 3613 to 3621, 3632 to 3646, 3729, 3752 to 3755, 3760 repayable on 1st January 1913. The unpaid debentures do not carry interest beyond the due date and will be repaid from the renewed grant when the holders apply for payment.
		(b) As under the terms of these Loans the bonds cannot be repaid to the holders before the dates stipulated in the Debentures, the Sinking Fund has been invested as under :—

	Amount of Sinking Fund invested up to 31st March 1912.	Sinking Fund Instalments paid in 1912-13.	Interest accumulations invested in 1912-13.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I.—5 per cent. Loans.				
46,300 0 0 — 44 Lakhs Sanitary Works Loan	17,39,429 3 0	41,150 6 6	78,683 13 3	18,59,263 6 9
7 Do. do. do. do.	2,75,166 5 1	8,240 2 6	12,018 5 11	2,95,424 13 6
147 Do. Tansa Water Works Loan	15,21,295 11 6	64,488 10 6	67,351 11 9	16,53,136 1 9
1,86,200 0 0 — 12 Do. Drainage and Water Works Loan	4,87,984 3 8	12,652 12 2	21,718 5 3	5,22,355 5 7
Rs. 10,08,500 Miscellaneous Works Loan	3,76,108 12 10	11,669 10 1	17,025 9 4	4,04,804 0 8
38,512 8 0 — Rs. 2,48,000 Agripada House Sullage Water Connections Loan	92,322 4 4	2,672 12 7	4,083 13 11	99,078 14 10
7,82,062 8 0 — 35 Lakhs Various Sanitary Works Loan	11,38,023 14 3	43,395 12 8	49,852 2 10	12,26,271 13 9
59,462 8 0 — 8 Do. Municipal Office Building Loan	2,47,694 0 6	9,112 1 5	11,159 13 6	2,67,965 15 2
Total I. ...	58,78,024 7 2	1,93,382 4 5	2,61,893 12 7	63,33,300 7 7
In 5 and 4 per cent. Municipal and 4 per cent. Improvement Trust Debentures and in 3½ per cent. Govt. Paper at par lodged with the Bank of Bombay		4,55,276 0 5		
49,925 0 0 —	58,73,000 0 0	4,55,000 0 0		63,28,000 0 0
Cash deposited with the Bank of Bombay	24 7 2	276 0 5		300 7 7
1,72,525 0 0 — *II.—4 per cent. Loans. (3½ per cent. basis.)*				
4½ Lakhs Fire Brigade Quarters and Stations Loan...	2,26,313 5 3	8,205 5 6	8,874 13 7	2,43,393 8 4
40,000 0 0 — 42 Lakhs Loan for repayment of Balance of Government Consolidated Loan	19,93,048 15 2	81,280 10 8	76,226 9 1	21,50,556 2 11
17,040 0 0 — 23¾ Lakhs Loan for Drainage and other Works ...	5,66,760 10 4	27,620 4 1	21,752 12 2	6,16,052 10 7
15½ Lakhs Loan for Sewerage, Wari Bunder, &c., Roads, Burial Ground and Certain Water Works (2nd Instalment)	1,32,268 11 1	7,291 4 6	5,092 6 5	1,44,652 6 1
1,65,050 0 0 — 25 Lakhs Loan for Sewerage, Water, &c., Works ...	4,21,195 6 2	29,274 11 10	15,902 3 10	4,66,372 5 10
20 Lakhs Loan for Plague purposes	9,44,788 0 3	69,578 18 5	37,079 6 9	10,51,446 4 5
92,690 0 0 — 19½ Lakhs Loan for Sewerage, Roads and other Sanitary Works...	2,98,146 1 2	22,470 7 2	11,574 7 2	3,32,190 15 5
24¾ Lakhs Loan for Sewerage and Water Works ...	2,65,628 15 9	28,926 1 8	10,392 11 6	3,04,947 12 11
12¾ Lakhs Loan for certain Water Works	1,95,652 10 11	25,117 13 0	7,527 12 2	2,28,298 4 1
2nd 24¾ Lakhs Loan for Sewerage Works	The Sinking Fund of this loan is shown under a separate head below, it having been decided that the investments should be on a 3 per cent. basis.			
58,310 0 0 —				
Total II ...	50,48,802 12 1	2,99,665 7 10	1,94,442 2 8	55,37,910 6 7
1,00,210 0 0 —				
80,560 0 0 — In 4 per cent. Municipal and Improvement Trust Debentures and in 3½ per cent. Govt. Paper lodged with the Bank of Bombay	50,43,668 2 0	4,94,107 10 6 4,94,000 0 0		55,37,668 2 0
74,940 0 0 —				
98,780 0 0 — Cash deposited with the Bank of Bombay	134 10 1	107 10 6		242 4 7
50,850 0 0 — *III.—4 per cent. Loans (3 per cent. basis.)*				
2nd 24¾ Lakhs Loan for Sewerage Works	1,76,471 2 10	32,801 1 8	5,826 13 11	2,15,099 2 5
99,390 0 0 — 13¾ Lakhs Loan for the construction of Quarters for Halalkhores and Bigaries	89,474 4 10	28,366 6 6	3,271 5 6	1,21,112 9 10
15 Lakhs Loan for Street Improvements	41,195 0 9	19,890 4 10	1,542 6 0	62,727 11 7
50 Lakhs Loan for acquisition of sites for Overbridges	81,774 7 7	39,788 4 1	3,266 6 7	1,24,829 2 3
53,350 0 0 —				
60,251 10 3 — Total III ...	3,88,915 0 0	120,846 1 1	14,907 0 0	5,23,768 1 1
In 3 per cent. Government Paper, etc., lodged with the Bank of Bombay		1,34,853 1 1 1,54,500 0 0		
1,19,272 13 2 —	3,88,900 0 0			5,23,400 0 0
1,19,460 0 0 — Cash deposited with the Bank of Bombay	15 0 0	353 1 1		368 1 1
IV.—3½ per cent. Loans.				
26,27,541 15 5 — 15¾ Lakhs Loan for Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works (1st instalment)	2,30,396 2 0	11,089 0 6	8,419 4 0	2,49,904 6 6
In 3½ per cent. Government Paper, etc., lodged with the Bank of Bombay	2,30,201 9 0	19,508 4 6 19,500 0 0		2,49,501 9 0
26,18,687 6 5 — Cash deposited with the Bank of Bombay	394 9 0	8 4 6		402 13 6
27,37,517 15 5 — GRAND TOTAL I, II, III and IV ...	1,15,36,138 5 3	6,24,982 13 10	4,78,762 2 8	1,26,89,883 5 9

J. CREBAR,

Municipal Commissioner.

Appendix

SINKING

STATEMENT showing the Actual Investments on account of the Sinking Fund of Different that date on the basis

NAME OF LOAN.	Amount raised.	When Repayable.	Amount of Annual Sinking Fund Instalment.	Date when Sinking Fund commenced.
1	2	3	4	5
	Rs.	Rs.	Rs.	
5 per cent. Municipal Loans.				
44 Lakhs Sanitary Works Loan ...	44,00,000	1st July 1886 7,000 1st „ 1887 4,43,000 1st „ 1890 51,000 1st „ 1895 1,60,000 1st „ 1925 37,39,000	† 41,872	..... *
7 Lakhs Sanitary Works Loan	7,00,000	1st February 1928 ...	8,170	1st February 1889...
147 Lakhs Tansa Water Works Loan ...	1,47,00,000	(*a*) Between 1st January 1928 and 1st Jan. 1953.	66,040	1st January 1893 ...
12 Lakhs Drainage and Water Works Loan.	12,00,000	1st January 1928 ...	(*b*) 12,616	1st January 1889 ...
Rs. 10,08,500 Miscellaneous Works Loan.	10,08,500	1st October 1928 ...	11,940	1st October 1889 ...
Rs. 2,48,000 Agripada House Sullage Water Connections Loan.	2,48,000	1st July 1929 ...	2,659	1st January 1891 ...
35 Lakhs various Sanitary Works Loan.	35,00,000	1st July 1930 ...	43,061	1st July 1891 ...
8 Lakhs Municipal Office Building Loan.	8,00,000	1st July 1931 ...	9,393	1st July 1892 ...
4 per cent. and 3½ per cent. Municipal Loans.				
4½ Lakhs Fire Brigade Quarters and Stations Loan.	4,50,000	1st January 1923 ...	8,570	1st January 1894 ...
42 Lakhs Loan for the repayment of the balance of Government Consolidated Loan.	42,00,000	1st July 1923 ...	80,678	1st July 1894 ...
23½ Lakhs Loan for Drainage and other Works.	23,25,000	1st July 1935 ...	27,467	1st July 1896 ...
15¾ Lakhs Loan for Sewerage, Wari Bunder, etc., Roads, Burial Ground and certain Water Works —				
1st Instalment	10,00,000 raised at 3½ per cent.	1st July 1936 ..	(*c*) 11,147	1st July 1897 ...
2nd Do.	5,75,000 raised at 4 per cent.		7,286	
25 Lakhs Loan for Sewerage, Water, etc., Works.	25,00,000	1st November 1939 ...	29,535	1st November 1900.
20 Lakhs Loan for Plague purposes ...	20,00,000	1st May 1920 ...	70,482	1st May 1901 ...
19½ Lakhs Loan for Sewerage Roads and other Sanitary Works.	19,25,000	1st June 1940 ...	22,698	1st June 1901 ...
24¾ Lakhs Loan for certain Sewerage and Water Works.	24,75,000	1st June 1943 ...	29,286	1st June 1904 ...
12¾ Lakhs Loan for certain Water Works.	12,75,000	1st August 1934 ...	24,698	1st August 1905 ...
2nd 24¾ Lakhs Loan for Sewerage Works.	24,75,000	1st August 1946 ...	(*d*) 32,823	1st August 1907 ...
13½ Lakhs Loan for the construction of Quarters for Halalkhores and Biggarries.	13,50,000	1st May 1938 ...	28,376	1st May 1909 ...
15 Lakhs Loan for Street Improvements	15,00,000	1st May 1949 ...	19,893	1st May 1910 ...
30 Lakhs Loan for the acquisition of Sites, for the construction of various overbridges in the City.	30,00,000	1st May 1949 ...	39,787	1st November 1910.
				Total Rs. ...

R. PEEL,
Acting Chief Accountant.

No. 7 (*a*).

FUND.

Loans up to 31st March 1913, compared with the amounts which should have accumulated up to of the Fixed Instalments.

Amount of Sinking Fund which should have accumulated up to 31st March 1913 at Compound Interest.	Amount actually invested up to 31st March 1913.	Amount of Interest due up to 31st March 1913 collected and invested in 1913-14.	Total of Columns 7 and 8.	REMARKS.
6	7	8	9	10
Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
18,39,464	18,59,263 6 9	31,386 6 10	18,90,649 13 7	† All the Sinking Fund Instalments were re-arranged during 1906-07 on a 3½ per cent. basis as per Corporation Resolution No. 4946 of 9th February 1905.
3,00,333	2,95,424 13 6	4,471 7 8	2,99,896 5 2	* As Rs. 5,51,000 of this Loan were paid off by 31st December 1925, leaving a balance of Rs. 27,39,000 repayable on 1st July 1923, and as the Invested Sinking Fund on 31st March 1896 amounted to Rs. 4,51,047-15-3 the amount of the Annual Sinking Fund Instalment was reduced from Rs. 37,000 to Rs. 30,550 from 1st January 1897.
6,75,860	16,53,136 1 9	25,505 14 2	16,78,641 15 11	
5,30,979	5,22,855 5 7	8,371 9 10	5,30,726 15 5	(*a*) Rs. 2,00,000 repayable on 1-1-1978. " 53,91,500 " " 1-1-1933. " 22,08,500 " " 1-1-1948. " 17,00,000 " " 1-1-1946. " 10,00,000 " " 1-1-1948. " 43,00,000 " " 1-1-1963.
4,10,896	4,04,804 0 3	6,639 6 6	4,11,443 6 9	
1,00,714	99,078 14 10	1,576 15 3	1,00,655 14 1	(*b*) In January 1889 Rs. 10,000 were invested and in subsequent years Rs. 11,000.
12,45,564	12,26,271 13 9	18,308 7 6	12,44,580 5 3	
2,71,891	2,67,965 15 2	4,237 7 7	2,72,203 6 9	
2,45,604	2,43,393 8 4	2,794 1 8	2,46,187 10 0	
* 21,76,188	21,50,556 2 11	23,918 11 9	26,74,474 14 8	
6,23,025	6,16,052 10 7	6,773 14 1	6,22,826 8 8	
2,51,990	2,49,904 6 6	2,551 12 8	2,52,456 3 2	(*c*) In 1897-98 Rs. 18,875 were invested in 3½ per cent. Government Paper.
1,46,209	1,44,652 6 1	1,548 14 7	1,46,201 4 8	
4,71,848	4,65,372 5 10	6,007 9 5	4,72,379 15 3	
10,62,845	10,51,446 4 5	13,273 14 10	10,64,720 3 3	
3,35,636	3,32,190 15 5	4,117 15 10	3,36,368 15 3	
3,07,718	3,04,947 12 11	3,604 2 11	3,08,551 15 10	
2,29,761	2,28,298 4 1	1,685 10 2	2,29,984 14 3	
2,16,557	2,15,099 2 5	1,528 5 3	2,16,627 7 8	(*d*) The Sinking Fund of this Loan has been calculated on 3.3 per cent. instead of 3½ per cent. basis since 1897-98.
1,21,979	1,21,112 0 10	907 11 4	1,22,019 12 2	
63,178	62,727 11 7	470 2 1	63,197 13 8	
1,24,514	1,24,629 2 3	935 9 4	1,25,764 11 7	
1,28,02,953	1,26,89,883 5 9	1,70,616 3 3	1,28,10,499 9 0	

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing the Interest outstanding on 1st April 1912 on the different of Bombay during that year, and the

	Name of each Loan.	Dates when raised.	AUTHORITY. Corporation Resolution.	AUTHORITY. Government Resolution.
	5 per cent. Loans.			
1	Drainage Loan of 1878 (Rs. 26,94,000) ...	1st November and 1st December 1878.	No. 1296 10-9-78.	No. 2951 28-9-78.
2	The Sanitary Works Loan of 1885-86 (Rs. 44,00,000).	Between 5th May 1885 and 30th March 1886.	Nos. 9021 8-12-81, 488 16-5-83 and 905 12-5-82	Nos. 2669 17-7-82, 460 4-2-84 and 384 2-2-83, 3771 19-10-85, 124 27-4-85.
3	The Sanitary Works Loan of 1888 (Rs. 7,00,000).	1st February 1888	No. 991 18-10-86.	No. 1427 4-5-88.
4	The Tansa Water Works Loan (Rs. 1,47,00,000).	Between 5th June 1886 and 24th December 1891.	Nos. 1312 18-11-85 and 345 9-4-91.	Nos. 561 12-2-86, 2876 21-9-87, 3392 22-8-90, and 1008 16-3-86, 3978 21-7-88, 3262-63 15-9-91. 1930 31-5-86 4198 8-10-88,
5	The Drainage and Water Works Loan of 1888 (Rs. 12,00,000).	1st January and 1st July 1888 ...	Nos. 894 20-7-87 and 1145 8-9-87.	Nos. 873 16-3-88.
6	The Miscellaneous Works Loan 1888-89 (Drainage and Water Works, Markets and Roads) (Rs. 10,08,500.)	Between 1st November 1888 and 1st July 1889.	No. 29 4-4-88.	Nos. 4987 7-9-88, 3280 19-9-89, and 4138 24-11-88
7	The Agripada House Sullage and Water Connections Loan of 1889-90 (Rs. 2,48,000).	Between 1st January and 1st July 1890.	No. 4688. 8-10-86.	Nos. 6547 28-12-89 and 17 3-1-90.
8	The Various Sanitary Works Loan of 1890-91 (Rs. 35,00,000).	Between 25th September 1890 and 1st January 1892.	Nos. 29 4-4-88, 572 13-5-89, 433 17-4-90 and 5293 19-11-88, 5152 25-11-89, 1488 22-3-90. 5605 7-1-89, 6238 23-1-90,	No. 3392 22-8-90.
9	The Municipal Building Loan of 1891 (Rs. 8,00,000).	24th December 1891	No. 11551 9-2-91.	No. 3262 15-9-91.
	4 per cent. Loans.			
10	The Loan for Fire Brigade Quarters and Stations (Rs. 4,50,000).	23rd December 1892, 30th November and 1st December 1893.	No. 5144 8-8-92.	Nos. 1022 29-3-92, 3145 and 2501 14-6-92, 6-9-92. 2164 28-6-93
11	The Loan for repayment of the balance of the 4½ per cent. Government Consolidated Loan (Rs. 42,00,000).	28th and 29th June 1893 ...	No. 13956 23-3-93.	No. 1239 6-6-93.
12	The Loan for Drainage and other Works (Rs.23,25,000).	12th and 31st January 1894 and 11th and 15th July 1895.	No. 6222 28-9-93.	Nos. 809 3-3-94. and 3764 8-10-94.
13	The Loan for Sewerage, Wari Bunder, &c., Roads, Burial Ground, and certain Water Works (Rs. 15,75,000 of which the 2nd instalment of Rs. 5,75,000 was raised at 4 per cent.).	17th July 1899	Nos. 804 12-4-94, 8876 7-11-95, 14435 23-3-97. 13097 7-3-95, 12034/6 4-2-97, and 8902 7-11-95, and	Nos. 3601 22-8-95, 2643 23-6-99. 883 22-2-96, 2320 3-6-99
14	The Loan for Sewerage and other Sanitary Works (Rs. 25,00,000).	17th and 18th July 1899 ...	Nos. 8976 7-11-95, 14436 25-3-97. 12034/5 4-2-97, and	Nos. 3841 A 28-8-97, 2320 3-6-99. and Telegram 26-7-98
15	The Loan for Plague purposes (Rs. 20,00,000).	6 lakhs raised between 15th July and 20th Dec. 1899, 6 lakhs raised in Nov. 1900 and 8 lakhs raised between 12th Aug. and 9th Oct. 1902.	No. 8099 6-12-97.	Nos. 4989 5-9-98 and 2320 3-6-99.
16	The Loan for Sewerage, Roads and other Sanitary Works (Rs. 19,25,000).	18th and 19th July 1899 and September 1900.	No. 628 18-4-98.	Nos. 4960 5-9-98. and 2540 16-6-99.
17	The Loan for certain Sewerage and Water Works (Rs. 24,75,000).	6 lakhs raised between 15th June and 1st July 1901, 11 lakhs raised between 23rd Aug. and 31st October 1901, 4 lakhs raised between 19th Aug. and 28th Oct. 1902, and 3¾ lakhs raised on 9th Sep. 1903.	No. 1956 14-6-1900	No. 3427 18-6-1901.
18	The Loan for certain Water Works (Rs. 12,75,000).	1st September 1904	No. 244 23-4-03.	No. 4416 22-8-04.
19	The 2nd 2½ Lakhs Loan for certain Sewerage Works.	Rs. 12 lakhs raised on 3rd September 1905 and Rs. 12½ lakhs on 9th September 1907.		No. 4004 21-7-05 and Telegram 31-8-05. No. 4792 5-8-07 and Telegram 31-7-07.
20	The 13½ Lakhs Loan for the Construction of quarters for Halalkhores and Biggaries.	7th August 1908	No. 2264 of 29-6-08	No. 3447 9-5-08.
21	The 15 Lakhs Loan for Street Improvements.	29th July 1909	No. 7558 of 20-3-07	No. 5178 17-8-08.
22	The 30 Lakhs Loan for the acquisition of sites for the construction of various over-bridges in the City.	29th July 1909, and 10th August 1910	No. 181 of 8-4-09	No. 3862 28-7-09.
23	1st Instalment of 30 Lakhs of the 55 Lakhs Loan for Drainage, Sanitary, Water and other Miscellaneous works.	7th and 10th August and 1st November 1911.	No. 6426 of 31-1-10	No. 4686 1-8-11 and Telegram No. 4686-A. 28-7-11
	3½ per cent. Loan.			
24	The Loan for Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works (Rs. 15,75,000, of which the 1st instalment of Rs. 10 lakhs was raised at 3½ per cent.)	1st December 1896	(*Vide* Reso. Nos. against Loan No. 13.)	(*Vide* Reso. Nos. against Loan No. 13) ... ...

R. PEEL,
Acting Chief Accountant.

No. 8.

Loans, the amounts payable for the year 1912-1913, the amounts paid by the Bank Balances outstanding on 31st March 1913.

Date when Loan is repayable.	Interest outstanding on 1st April 1912.	Interest payable in 1912-1913.	Total Interest due.	Less Interest paid by the Bank of Bombay.	Outstanding Balance on 31st March 1913.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1st January 1919	15,075 0 0	45,425 0 0	60,525 0 0	46,300 0 0	14,200 0 0
					(a) 25 0 0
1st July 1925	22,762 8 0	1,86,950 0 0	2,09,712 8 0	1,86,200 0 0	23,512 8 0
1st February 1928	9,387 8 0	35,000 0 0	44,387 8 0	38,512 8 0	5,875 0 0
Between 1st January 1928 and 1st January 1953.	26,675 0 0	7,35,000 0 0	7,61,675 0 0	7,32,062 8 0	29,612 8 0
1st January 1928	4,412 8 0	60,000 0 0	64,412 8 0	59,462 8 0	4,950 0 0
1st October 1928	1,825 0 0	50,425 0 0	51,750 0 0	49,925 0 0	1,825 0 0
1st July 1929	37 8 0	12,400 0 0	12,437 8 0	12,400 0 0	37 8 0
1st July 1930	13,287 8 0	1,75,000 0 0	1,88,287 8 0	1,72,525 0 0	15,762 8 0
1st July 1931	.....	40,000 0 0	40,000 0 0	40,000 0 0	.....
1st January 1928	1,480 0 0	18,000 0 0	19,480 0 0	17,040 0 0	2,350 0 0
1st July 1928	18,850 0 0	1,68,000 0 0	1,86,850 0 0	1,65,050 0 0	21,800 0 0
1st July 1935	8,710 0 0	93,000 0 0	1,01,710 0 0	92,690 0 0	9,020 0 0
1st July 1936	460 0 0	23,000 0 0	23,460 0 0	22,960 0 0	500 0 0
1st November 1939	780 0 0	1,00,000 0 0	1,00,780 0 0	1,00,210 0 0	570 0 0
1st May 1920	7,020 0 0	80,000 0 0	87,020 0 0	80,560 0 0	6,460 0 0
1st June 1940	4,310 0 0	77,000 0 0	81,310 0 0	74,940 0 0	6,370 0 0
1st June 1948	4,790 0 0	99,000 0 0	1,03,790 0 0	98,780 0 0	5,010 0 0
1st August 1934	2,090 0 0	51,000 0 0	53,090 0 0	50,850 0 0	2,240 0 0
1st August 1946	1,900 0 0	99,000 0 0	1,00,900 0 0	99,390 0 0	1,510 0 0
1st May 1938	3,094 6 3	54,000 0 0	57,094 6 3	53,350 0 0	3,744 6 3
1st May 1949	2,651 11 9	60,000 0 0	62,651 11 9	60,251 10 3	2,400 0 0
					(b) 0 1 6
1st May 1949	4,174 9 0	1,20,000 0 0	1,24,174 9 0	1,19,272 13 2	4,901 11 10
1st June 1942	.....	1,20,000 0 0	1,20,000 0 0	1,19,460 0 0	540 0 0
1st July 1936	525 0 0	35,000 0 0	35,525 0 0	35,350 0 0	175 0 0
Total Rs. ...	1,53,748 3 0	25,37,225 0 0	26,30,973 3 0	25,27,541 15 5	1,53,406 2 1
					(a & b) 25 1 6

(a) Excess provision made in the budget, now shown as savings.

(b) Difference arising on account of interest for broken period on small holdings.

J. CRERAR,
Municipal Commissioner.

Appendix No. 9.

STATEMENT showing Works executed out of Loan Funds during 1912-1913.

Particulars.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs a. p.
A.—BUILDINGS AND SANITARY STRUCTURES—			
13½ LAKHS LOAN—			
Construction of chawls, &c., for Halalkhores at Valpakhadi (Mazagon)	814 14 7		
Construction of a stable at Mahim	81 9 0		
Construction of Sankli Tank Bullock Hospital with residential quarters for Inspector and Shalotri	32,894 4 4		
Construction of chawls for Bigaries at Arthur Road... ...	31,506 2 8		
Construction of stables and chawls for B Ward at Jail Road	46,447 5 6		
Construction of a stable for E Ward, West, at Kamatipura...	31,254 6 8		
Construction of stables and chawls for bigaries and bullocks of D Ward at Gilder Tank site...	1,26,807 8 0	3,19,806 2 4	
SAVINGS ON DIFFERENT LOANS—			
Providing latrines and urinals at different places... ...	2,341 3 10		
Acquisition of land at Colaba as a site for quarters for Halalkhores	44 10 7		
Market at Kamatipura	1,280 0 2	3,665 14 7	
ADVANCES FROM SURPLUS BALANCES—			
Construction of 25 bathing places in the City...	761 0 0		
Building a new office for the use of F and G Ward Offices at Dadar and converting the existing Ward Office into a godown and providing latrines for the workmen	1,710 10 6		
Purchase of about 4,030 square yards of land at the Junction of Bapti Road and Falkland Road belonging to the Tramway Authorities	1,223 6 0		
Construction of a Fire Brigade Station at Elphinstone Bridge Road	11,048 7 0		
Construction of Buildings for Primary Schools	*Cr.* 1,21,937 11 9		
Construction of two additional chawls for bigaries at Chembur	17,094 1 0		
		Cr. 90,100 3 3	
A—Buildings and Sanitary Structures—Total Rs. ...			2,33,371 13 8
B.—ROADS AND OVERBRIDGES—			
15¾ LAKHS LOAN—			
Wari Bunder Road	.....	9,531 15 10	
30 LAKHS LOAN—			
Overbridge at Currey Road, G. I. P. Railway	24,564 15 9		
Do. at Arthur Road do.	561 2 4		
Do. at Clerk Road do.	1,501 8 1		
Do. at Clerk Road, B. B. & C. I. Railway... ...	28,461 6 0		
Do. at Elphinstone Road, B. B. & G. I. P. Railways.	9,332 11 11		
Do. at DeLisle Road	5,26,520 1 6		
Establishment charges for various Overbridges	8,101 4 11	5,99,043 2 6	
B—Roads and Overbridges—Carried over ... ... Rs.		6,08,575 2 4	
Carried forward Rs.			2,33,371 13 8

Appendix No. 9—*continued.*

Particulars.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...Rs.			2,38,371 13 8
B.—ROADS AND OVERBRIDGES—*contd.* and brought forward ...Rs.		6,08,575 2 4	
ADVANCES FROM SURPLUS BALANCES—			
Street Improvements in different places	1,112 15 0		
At Fergusson Road—146 sq. yds...	279 7 7		
Construction of a road from the B. B. & C. I. Railway Matunga Station Westward to Mahim including Storm-water drains	53,993 14 3		
Construction of a 60 ft. road along Tulsi pipe line from DeLisle Road to Dadar Road, including Storm-water drains and other roads	0 3 0		
Improvement of Worli road	13,493 12 6		
	68,880 4 4		
ADVANCES TO BE ADJUSTED AGAINST SALE PROCEEDS OF SURPLUS LAND—			
Acquisition of land at Chunam Kiln Lane	32 5 5		
		68,912 9 9	
B.—Roads and Overbridges—Total Rs.	.....	.....	6,77,487 12 1
C.—DRAINAGE—			
24¾ LAKHS LOAN—			
Difference in the cost of the works proposed by Mr. Santo Crimp in connection with the drainage of the lower parts of the City	658 13 0		
Completion of house drainage connections in different parts of the City	36,083 15 9		
		36,742 12 9	
SECOND 24¾ LAKHS LOAN—			
Construction of a new outfall at Worli Point	5,491 0 9		
Sewerage of the Elphinstone Reclamation	46,810 10 2		
		52,301 10 11	
SAVINGS ON DIFFERENT LOANS—			
Giving Street Connections to Storm-water drains in the City	2,077 12 8		
Laying a 6″ pipe drain at Warden Road and Tardeo Roads..	480 3 6		
Constructing a Road side drain and providing a covered storm-water drain at Girgaum Back Road	12,642 14 9		
Laying a 6″ pipe drain in the compound of premises No. 14-20 to the East of Cumballa Hotel Lane	509 7 7		
Constructing a masonry drain with four manholes and eight half-sized water entrances at DeLisle Road...	6,351 8 10		
Filling in open Side Drains on both the sides and providing covered storm-water drains with water tables and water gullies in portions of 1st to 5th Khetwadi Lanes and Main Roads	883 3 3		
Filling in old side drains and providing a covered drain with manhole*, full-sized and half-sized water entrances with water tables on 14th Khetwadi Lane	3,104 6 3		
Providing Storm-water drain with water entrances and water tables at 11th Khetwadi Lane	3,184 12 1		
		29,234 4 11	
ADVANCES FROM SURPLUS BALANCES—			
Extension of Low Level Channel No. 2 from DeLisle Road to Dadar Road	12,866 10 9		
Construction of a S.-W. Drain from the junction of Reay and Connaught Roads to the Harbour near Lakri Bander...	54,827 0 5		
Measures for relieving the surcharging of sewers	3,25,991 14 5		
Provision of Ejectors in the Colaba Sub-District	5,399 7 9		
		3,99,084 1 4	
C—Drainage—Total Rs. ...			5,17,862 13 11
D—WATER WORKS—			
24¾ LAKHS LOAN—			
Distribution mains in Tardeo and Gamdevi Roads	23 1 10		
9″ and 10″ Pipes from Grant Road to Kamatipura	757 14 5		
		781 0 3	
D—Water Works—Carried over Rs. ...		781 0 3	
Carried over ...			14,28,222 7 8

Appendix No. 9—*concluded.*

Particulars.	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward Rs. ...			14,28,222 7 8
D—Water Works—*contd.* and brought forward Rs....	.....	781 0 3	
12¾ LAKHS LOAN—			
9" and 4" mains in the new Roads in the Agripada District...	163 8 5		
Replacement of the Vehar main for the whole distance between Vehar and Coorla, north of Coorla	3,24,638 6 6		
		3,24,801 9 11	
SAVINGS ON DIFFERENT LOANS—			
Renewal of Water Mains in the Girgaum District for improvement of the Water Supply	1,641 9 1		
Replacing 32" Vehar pipes for 1½ miles by 48" C. I. Main North of Coorla	193 15 0		
		1,835 8 1	
ADVANCES FROM SURPLUS BALANCES—			
Improvement of Water Supply in Mahim District	34 8 0		
Fixing Deacon's Meters on the distributing mains	3,380 1 6		
Removing and relaying the 32" Vehar main South of Coorla	*Cr.* 8,781 13 7		
Laying a 5" service main in Sandhurst Road	26,490 7 10		
Laying 12" main in Fergusson Road to 32" Vehar main in DeLisle Road	599 15 10		
Substitution of an Electrically driven Turbine pump for plunger pumps and construction of a water tower on Malabar Hill Reservoir	2,203 3 2		
Laying water mains in A Ward	11,238 9 11		
Do. do. B "	199 10 4		
32" outlet mains from Malabar Hill to Chowpati	*Cr.* 700 0 0		
Extending 32" main in Parel Road northward through DeLisle Road	1,218 3 10		
Replacing 3" water main in Mugbhat Cross Lane by a 5" main	*Cr.* 1,455 7 0		
Connecting up the Dead End of the 4" main in Kakadwadi Lane with the main in Girgaum Back Road...	*Cr.* 675 6 3		
Replacing 3" water main in Mahomedan Street at Ripon Road by a 5" main	*Cr.* 2,182 11 1		
Providing the trunk water mains with Venturi water meters	*Cr.* 1,346 5 8		
Laying a 6" main in the new Mathew Road	*Cr.* 4,663 7 1		
Replacing 3" water main in Gunpowder Road by a 5" one and extending it to join the 9" main in Reay Road ...	*Cr.* 3,286 15 10		
Replacing 3" water main in Mazagon Road by a 5" one and extending it to join the 4" main in Wari Bunder Road ...	*Cr.* 4,765 0 6		
Connecting the two dead ends of the 4" main in Wari Bunder Road by a 5" one	*Cr.* 1,383 15 6		
Laying a 6" rider main in Kavasji Patel Tank Road	*Cr.* 4,549 14 10		
		11,633 11 1	
D—Water Works—Total Rs. ..	...		3,39,051 13 4
E—CEMETERIES—			
SAVINGS ON DIFFERENT LOANS—			
Providing a boundary wall at Haines Road Cemetery ...	4,732 2 4		
Filling in a portion of Haines Road Cemetery...	9 8 0		
		4,741 10 4	
ADVANCES FROM SURPLUS BALANCES—			
Extension of the Sewri Cemetery	12,140 7 4		
Providing a Burial Ground for Mahomedans in F and G Wards at Antop Hill, Matunga	568 7 4		
		12,708 14 8	
E—Cemeteries—Total Rs. ...			17,450 9 0
F—DISPOSAL OF TOWN SWEEPINGS—			
19½ LAKHS LOAN—			
Extra cost of the Scheme for the Disposal of Town Sweepings at Deonar			1,353 13 0
G—MISCELLANEOUS—			
ADVANCES FROM SURPLUS BALANCES—			
Filling in the Babula Tank with debris		1,341 15 4	
G—Miscellaneous—Total Rs....			1,341 15 4
Loan Works, Grand Total Rs. ...			17,87,920 10 4

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix No. 9-A.

STATEMENT of Expenditure on Plague Operations for 1912-1913 contrasted with the figures for 1911-1912.

Particulars.	Actual Expenditure for 1911-12.	Actual Expenditure for 1912-13.
	Rs. a. p.	Rs. a. p.
Free Medical Relief—		
Hospitals—		
I. Maratha Hospital	28,762 8 11	19,886 11 7
Maintenance of Camps	8,818 3 6	10,010 15 2
Net Municipal Contribution to Private Health Camps, &c.	4,604 6 10	3,313 3 0
Cutting off service pipes	65 14 5	151 3 3
Fees for notification of plague cases	475 0 0	269 0 0
General supervision	16,549 0 9	15,056 14 6
Firewood for cremation of dead bodies	461 12 0	.....
Disinfection	38,807 4 6	38,271 15 0
Registration	9,185 13 0	10,312 10 10
Rat destruction	39,362 1 11	44,017 7 9
Inoculation	1,038 3 6	406 0 6
Discretional relief	600 5 6	227 15 6
Local allowance	1,837 15 5	1,403 2 5
Grain compensation	.....	3,174 9 8
Overcrowding Inspectors	840 0 0	770 0 0
Providing teakwood ceiling to 3 permanent wards in Maratha Hospital	3,107 7 4	.....
Laying on gas connection in the wards of the Maratha Hospital	2,204 2 6	.....
Constructing semi-permanent quarters at Maratha Hospital	.....	1,322 5 9
	1,56,720 4 1	1,48,599 2 11
Less—Miscellaneous Receipts on account of ground rent, &c.	—817 4 1	—836 2 9
Total Rs.	1,55,903 0 0	1,47,763 0 2

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing the Liabilities and Assets

Liabilities.			Amount.	Total.	Grand Total.
I.—Debt.			Rs.	Rs.	Rs. a. p.
Due to Government—					
Vehar Debt					22,66,416 3 9
Due to the Public—		Original.	Repaid.	Balance.	
5 per cent. Loans		Rs.			
Drainage Loan of 1878		26,94,000	18,64,000	8,30,000	
Sanitary Works Loan of 1885-86		44,00,000	6,61,000	37,39,000	
Sanitary Works Loan of 1888		7,00,000	.....	7,00,000	
12 Lakhs Drainage and Water Works Loan		12,00,000	.....	12,00,000	
Rs. 10,08,500 Miscellaneous Works Loan		10,08,500	.....	10,08,500	
Rs. 2,48,000 Agripada House Sullage Water Connection Loan ...		2,48,000	.....	2,48,000	
35 Lakhs Various Sanitary Works Loan		35,00,000	.....	35,00,000	
147 Lakhs Tansa Water Works Loans		1,47,00,000	.....	1,47,00,000	
8 Lakhs Municipal Office Building Loan		8,00,000	.....	8,00,000	
	Total 5 per cent. Loans ...	2,92,50,500	25,25,000	2,67,25,500	
4 per cent. Loans.					
4½ Lakhs Loan for Fire Brigade Quarters and Stations		4,50,000	.....	4,50,000	
42 Lakhs Loan for Repayment of Balance of Government Consolidated Loan		42,00,000	.....	42,00,000	
23¼ Lakhs Loan for the construction of Drainage, Water Works and other Works		23,25,000	.....	23,25,000	
15¾ Lakhs Loan for the construction of Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works (2nd Instalment)		5,75,000	.....	5,75,000	
25 Lakhs Loan for Sewerage, Water and other Sanitary Works ...		25,00,000	.....	25,00,000	
19¼ Lakhs Loan for Sewerage, Roads and other Sanitary Works ...		19,25,000	.....	19,25,000	
20 Lakhs Loan for Plague Expenses		20,00,000	.....	20,00,000	
24¾ Lakhs Loan for Sewerage and Water Works		24,75,000	.....	24,75,000	
12¾ Lakhs Loan for certain Water Works...		12,75,000	.....	12,75,000	
Second 24¾ Lakhs Loan for certain Sewerage Works		24,75,000	.....	24,75,000	
13½ Lakhs Loan for the construction of Quarters for Halalkhores and Beggaries		13,50,000	.....	13,50,000	
15 Lakhs Loan for Street Improvements...		15,00,000	.....	15,00,000	
30 Lakhs Loan for the construction of Overbridges in the City ...		30,00,000	.....	30,00,000	
55 Lakhs Loan for Miscellaneous Works (1st Instalment)		30,00,000	.....	30,00,000	
	Total 4 per cent. Loans ...	2,90,50,000	.....	2,90,50,000	
Debt due to the Public—Carried over ... Rs. ...		5,83,00,500	25,25,000	5,57,75,500	
Do. Govt. do.		.....	.....		22,66,416 3 9

No. 10.

of the Bombay Municipality at 31st March 1913.

Assets.	Face value.	Actual cost.	Deposits—Current account & fixed deposits.	Amount.	Total.	Grand Total.
				Rs. a. p.	Rs. a. p.	Rs. a. p.
I. Cash Balance at 31st March 1913 in the Office and Bank Treasuries—						4,51,938 5 7
II. Advances Recoverable.—						
a. Cash advanced to Municipal Officers					31,113 7 4	
b. Inter-departmental Charges—						
Workshops (Private and Departmental Works)				15,773 6 1		
Engineer's Department (Private Works)				37,932 9 8		
Engineer's Department (Departmental Works)—				9,390 8 6		
					63,096 8 3	
c. Advances to Contractors					26,426 15 8	
d. Miscellaneous					51,998 14 0	
e. Advances to the Chief Auditor and Accountant, G. I. P. Ry.					35,267 0 0	
f. New Works to be subsequently provided for under a new loan to be raised					12,60,338 6 9	
g. Advances to the Chief Auditor and Accountant, B. B. & C. I. Railway					875 0 0	
						14,69,516 4 0
III. Investments.—						
***a.* Surplus Funds Deposits—Paper.**						
4 per cent. Port Trust Bonds	Rs. 3,47,500 0 0	Rs. 3,54,524 11 0	Rs. a. p.			
4 per cent. Municipal Debentures	32,000 0 0	31,877 8 0				
4 per cent. Bombay Improvement Trust Debentures	2,33,000 0 0	2,32,044 6 0				
3½ per cent. Government Paper	58,800 0 0	56,855 1 0				
3 per cent. Government Paper	24,100 0 0	20,846 8 0				
Total	6,95,400 0 0	6,96,148 2 0	31,02,792 0 5	37,98,940 2 5	37,98,940 2 5	
***b.* Loan Funds.—**						
4 per cent. Municipal Debentures	1,500 0 0	1,495 0 0				
4 per cent. Bombay Improvement Trust Debentures	6,500 0 0	6,508 2 0				
3½ per cent. Government Paper	8,44,000 0 0	8,15,932 8 0				
Total Loan Funds	8,52,000 0 0	8,23,935 10 0	13,56,590 4 10	21,80,525 14 10	(*a*) 21,80,525 14 10	
***c.* Sinking Funds.—**			Cash Deposits.			
5 per cent. Municipal Loans.—						
5 per cent. Municipal Debentures	34,66,000 0 0	34,66,000 0 0				
4 per cent. Municipal Debentures	5,65,500 0 0	5,65,500 0 0				
4 per cent. Bombay Improvement Trust Debentures	5,97,500 0 0	5,97,500 0 0				
3½ per cent. Government Paper	16,99,000 0 0	16,99,000 0 0				
Total	63,28,000 0 0	63,28,000 0 0	300 7 7	63,28,300 7 7		
4 per cent. Municipal Loans—(3½ per cent. Basis).—						
4 per cent. Municipal Debentures	18,26,500 0 0	18,26,316 6 9				
4 per cent. Bombay Improvement Trust Debentures	22,36,500 0 0	22,36,551 11 3				
3½ per cent. Government Paper	14,74,800 0 0	14,74,800 0 0				
Total	55,37,800 0 0	55,37,668 2 0	242 4 7	55,37,910 6 7		
4 per cent. Municipal Loans—(3 per cent. Basis.)—						
3½ per cent. Government Paper	47,500 0 0	47,500 0 0				
3 per cent. Government Paper	4,75,900 0 0	4,75,900 0 0				
Total	5,23,400 0 0	5,23,400 0 0	368 1 1	5,23,768 1 1		
3½ per cent. Loans.—						
4 per cent. Municipal Debentures	24,100 0 0	24,000 0 0				
4 per cent. Bombay Improvement Trust Debentures	30,000 0 0	30,000 0 0				
3½ per cent. Government Paper	1,98,800 0 0	1,95,501 9 0				
Total	2,52,900 0 0	2,49,501 9 0	402 13 6	2,49,904 6 6		
Total Sinking Funds	1,26,41,500 0 0	1,26,38,569 11 0	1,313 10 9	1,26,39,883 5 9	*1,26,39,883 5 9	
***d.* Special Funds.—**						
MUNICIPAL BUILDINGS FIRE INSURANCE FUND						
5 per cent. Municipal Debentures	27,000 0 0	27,000 0 0				
4 per cent. Municipal Debentures	40,500 0 0	40,092 3 0				
4 per cent. Bombay Improvement Trust Debentures	90,000 0 0	91,797 3 0				
4 per cent. Port Trust Bonds	500 0 0	510 5 0				
3½ per cent. Government Paper	7,000 0 0	7,190 15 0				
Total	1,65,000 0 0	1,66,590 10 0	420 15 2	1,67,011 9 2		
Special Funds carried over Rs.	1,65,000 0 0	1,66,590 10 0	420 15 2	1,67,011 9 2		
Carried over Rupees	.....	.....	.....	.....	1,86,19,349 7 0	19,21,454 9 7

(*a*) Of this Rs. 2,50,016-7-7 belong to the Water Work Account.

* Of this Rs. 47,91,851 belong to the Water Works Account.

Appendix

LIABILITIES AND ASSETS of the Bombay

Liabilities.		Amount.	Total.	GRAND TOTAL.
		Rs.	Rs.	Rs. a. p.
Debt due to Govt. Brought forward		.....	.....	22,63,416 3 9
	Original. Rs.	Repaid.	Balance.	
Do. to the Public. Brought forward	5,83,00,500	25,25,000	5,57,75,500	
3½ % *Loan.*				
15½ Lakhs Loan for the construction of Sewerage, Wari Bunder, &c., Roads, Burial Grounds and certain Water Works (1st Instalment)	10,00,000	.....	10,00,000	
Total 5 %, 4 per cent. and 3½ per cent. Loans...	5,93,00,500	25,25,000	5,67,75,500	
Total Debt due to the Public Rs. ...				5,67,75,500 0 0
II.—Deposits.				
Contractors', &c., deposits in Cash...		5,32,045 5 2		
Deposits on account of works performed for private parties		63,751 8 0		
			5,95,796 13 2	
Contractors', &c., Government, &c., Paper Deposits (lodged with the Bank of Bombay)		3,27,600 0 0		
Contractors', &c., Government, &c., Paper Deposits (kept in Office)		73,200 0 0		
Paper Deposits from Municipal Employés and Contractors pending submission to the Bank of Bombay (kept in office)...		24,000 0 0		
Deposit on account of Mr. Kasumalli Jairazbhai Pirbhai's Fountain at the Junction of Hornby Road and Palton Road		5,000 0 0		
Deposit on account of the maintenance of J. N. Tata's memorial		1,200 0 0		
Deposit on account of Sir Mangaldas Nathoobhai's Clock		500 0 0		
Deposit for the maintenance of a charitable dispensary at Kamatipura opened by Rao Bahadur Ellapa Balaram		19,500 0 0		
			4,51,000 0 0	
Government of Bombay on account of Income Tax recovered from Establishments.		20 15 9		
Income Tax recovered from Owners of Public Land conveyances		350 14 2		
			371 13 11	
Court attachments			11 4 0	
Miscellaneous Receipts, Stores Dept. Supervision Charges on stores sold		370 13 11		
Profit on sale of stores		2,044 8 1		
			2,415 6 0	
Interest realized on Government, &c., Paper lodged by Municipal employés, Contractors, &c....			227 5 1	
(Government of Bombay) Land Conveyance Licenees, &c.:—				
Through Chief Accountant on account of License Fees, Badges, &c.		5,069 11 0		
Government of Bombay—Expenses for sending indigent persons to the Pasteur Institute at Kasauli or Coonoor		100 0 0	5,169 11 0	
				10,54,992 5 2
III.—Purchases (Stores)			62,885 11 8	
Stock adjustment account			5,889 6 5	
IV.—Loan Works Establishment				
V.—Cheques Payable				68,225 2 1
VI.—Book value of Municipal Lands at Agripada, &c., transferred to the Improvement Trust				17,869 15 8
VII.—Contribution from Government towards the cost of Primary School Buildings...				2,48,953 3 10
VIII.—Interest and Instalments on account of Sinking, &c., Funds.—				17,15,289 5 11
				69,572 1 8
Interest and Instalments on account of Sinking Funds			1,26,89,888 5 9	
Do. do. do. Insurance, &c., Funds			8,94,848 0 7	
				1,35,34,726 6 4
Bank of Bombay on account of Contractors' Securities held under objection				100 0 0
Total Liabilities ...				7,57,51,644 12 5
Balance being Assets in excess of Liabilities				1,59,38,892 4 7
Total Rs. ...				9,16,90,537 1 0

R. PEEL,

Acting Chief Accountant.

No. 10—*concluded.*

Municipality at 31st March 1913.

Assets.	Nominal value.	Actual cost.	Cash deposits.	Amount.	Total.	Grand Total.
				Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...					1,86,19,349 7 0	19,21,454 9 7
	Rs. a. p.	Rs. a. p.	Rs. a. p.			
Special Funds Brought over	1,65,000 0 0	1,66,590 10 0	420 15 3	1,67,011 9 2		
Worn-out Water Mains Renewal Fund—						
5 per cent. Municipal Debentures... ...	1,45,500 0 0	1 45,500 0 0				
4 per cent. Municipal Debentures... ...	1,66,000 0 0	1,63,791 14 0				
4 per cent. Bombay Improvement Trust Debentures	1,77,000 0 0	1,80,300 15 0				
4 per cent. Port Trust Bonds	10,000 0 0	10,206 4 0				
3½ per cent. Government Paper	35,500 0 0	36,465 0 0				
Total ...	5,34,000 0 0	5,36,254 1 0	261 2 1	5,36,515 3 1		
B. Net Premia Fund—						
5 per cent. Municipal Debentures ...	22,000 0 0	22,000 0 0				
4 per cent. Municipal Debentures ...	57,500 0 0	57,842 8 0				
4 per cent. Port Trust Bonds	20,000 0 0	20,412 13 0				
4 per cent. Bombay Improvement Trust Debentures	1,04,500 0 0	1,05,081 4 0				
Total ...	2,04,000 0 0	2,05,336 9 0	521 15 2	(a) 2,05,858 8 2		
Total Special Funds ...	9,03,000 0 0	9,08,181 4 0	1,204 0 5	9,09,385 4 5	9,09,385 4 5	
			Rs. a. p		1,95,28,734 11 5	
e. Contractors', &c., Paper Deposits				3,27,600 0 0		
f. Bank of Bombay on account of Public monuments, &c.—						
(1) Paper Deposit on account of Sir Mangaldas Nathoobhai's Clock ...			500 0 0			
(2) Maintenance of Cassumali Jairazbhai Pirbhoy's fountain at the Junction of Hornby Road and Palton Road...			5,000 0 0			
(3) Maintenance of J. N. Tata's Memorial			1,200 0 0			
(4) Maintenance of a Charitable Dispensary at Kamatipura opened by Rao Bahadur Ellapa Balaram			19,500 0 0	26,200 0 0		
					3,53,800 0 0	
						1,98,82,534 11 5
IV. Reserve Stock—						
Serviceable Stores—						
Stock				3,01,553 0 8		
Water Works Imprest				3,283 8 5		
					3,04,836 9 1	
Line suspense account					1,16,397 8 9	
					2,164 14 0	
Executive Engineer (General)					4,23,398 15 10	
Surplus and obsolete stores					26,868 6 9	
						4,50,267 6 7
Sales Stores						15,094 11 4
V. Loan Works—Construction—						
a. Buildings and Sanitary Structures				67,76,442 1 0		
b. Roads and Bridges				71,78,085 4 8		
c. Drainage (including Buildings)				1,71,35,890 9 7		
d. Water Works (Do.)				3,02,17,013 13 4		
e. Cemeteries (Burning and Burial Grounds)				6,97,294 3 5		
f. Disposal of Town Sweepings				10,31,108 6 1		
g. Miscellaneous				82,246 2 2		
					6,31,68,060 8 3	
VI. Unbooked Property					45,87,835 11 11	
					6,77,05,896 4 2	
VII. Other Property—						
Lands transferred to Bombay Improvement Trust...					17,15,289 5 11	
						6,94,21,185 10 1
Total Rs. ...						9,16,90,537 1 0

(a) Of this Rs. 23,603-6-2 belong to the Water Works Account.

J. CRERAR,
Municipal Commissioner.

Appendix No. 10-A.

SCHEDULE of New Works, &c., carried out from Loan and Special Funds up to 31st March 1913.

	Amount.	Total.	GRAND TOTAL.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.—BUILDINGS AND SANITARY STRUCTURES—			
Bandora Slaughter Houses	2,84,297 12 8		
Workshop and Store Shed	1,49,079 7 1		
Girgaum Police Court (Share of)	34,000 0 0		
Null Bazar Market	1,50,770 1 7		
Fort Market	22,066 7 11		
Arthur Crawford Market	11,39,410 11 6		
		17,29,624 8 9	
44 *Lakhs Sanitary Works Loan*—			
Enlargement of Dhobi Lines at Mahaluxmi	28,499 12 8		
Chawl for Gowlies working at the Agripada Milch-Cattle Stables	6,129 13 6		
Health Department Stables at Bori Bunder	43,677 13 3		
Establishment Charges for the above three Works	8,803 2 6		
		87,110 9 6	
10,08,500 *Miscellaneous Works Loan*—			
Market at Colaba	*a* 44,393 15 11		
Extension of Erskine Road Market	*b* 3,99,758 0 0		
Extension of the Arthur Crawford Mutton Market	42,754 2 9		
		4,86,906 2 8	
35 *Lakhs Various Sanitary Works Loan*—			
Health Department Bullock Stables and Quarters for Scavengers	1,23,897 4 11		
Bhuleshwar Market Extension	2,22,817 1 11		
Labourers' Quarters in connection with the Arthur Crawford Market	9,518 14 3		
Foras Road Market	40,499 14 11		
Chawl for Halalkhores in Cursetji Suklaji Street	88,460 8 2		
		5,85,193 12 2	
8 *Lakhs Loan and Special Investment Fund*—			
Municipal Office Buildings		*c* 14,67,886 11 3	
4½ *Lakhs Fire Brigade Loan*—			
Land and Buildings for Fire Brigade		4,03,320 6 1	
13½ *Lakhs Various Sanitary Buildings Loan*—			
Construction of Chawls, &c., for Halalkhores at Valpakhadi (Mazagaon) Rs. 1,80,000-0-0	2,25,962 13 8		
Additional land for do. do. Rs. 50,000-0-0			
Construction of semi-permanent huts for Biggaries at Arthur Road	28,379 0 10		
Construction of Chawls for Halalkhores, &c., at Cochin Street, Fort	56,554 5 6		
Construction of stables for the Health Department on the Grant Road Hospital site	47,334 4 7		
Construction of the Sankli Tank Bullock Hospital with residential quarters for Inspector and Shalotri	1,34,378 8 4		
Construction of a stable for Bullocks of Night Branch and an Office at Arthur Road	64,655 2 4		
Construction of stables and Chawls for B Ward at Jail Road north	51,577 8 2		
Construction of stabes and Chawls for D Ward Bullocks and Biggaries at Gilder Tank site	1,27,886 0 1		
Construction of Chawls for Biggaries at Arthur Road	81,551 14 3		
Construction of stable for E Ward, west of Kamatipura	22,838 2 8		
Construction of Chawls for Halalkhores at Tardeo Flats	1,309 15 3		
Construction of a stable for Bullocks at Mahim	81 9 0		
		8,52,509 4 3	
55 *Lakhs Loan*—			
Construction of additional quarters for Fire Brigade Staff at Byculla Fire Brigade Station	30,995 8 8		
Construction of an Engine House and Foreman's quarters of the Sankli Tank Fire Brigade Station	26,552 13 0		
Construction of Shops on the Western and Southern sites at the Arthur Crawford Markets, Hornby Road	4,822 7 10		
55 Lakhs Loans, carried over ... Rs.	62,370 13 6		
A.—Buildings and Sanitary structures carried over Rs. ...		56,12,951 6 8	

(*a*) Exclusive of Rs. 21,940 paid out of the Premia received on the Loan, and Rs. 28,060 paid out of Savings on different Loans.

(*b*) Exclusive of Rs. 31,908-11-11 paid out of the Premia received on the Loan.

(*c*) Inclusive of Rs. 7,34,326-8-3 paid out of the Invested Fund.

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.—Buildings and Sanitary Structures—*contd.* and brought forward ... Rs.		56,12,051 6 8	
55 Lakhs Loan—*contd.* and brought forward ... ... Rs.	62,870 13 6		
Building a new office in Sankli Street for the use of the Assessment Department, E Ward Office, and constructing a Ward Office, Chowkidars' Quarters and Store Room for the Streets and Buildings Branch, E Ward, in Sankli Street...	22,871 7 10		
Building a new Office at Dadar for the use of the Assessment Department, F and G Ward offices and converting the existing Ward Office into a godown and providing latrines for the workmen	10,079 4 5		
Constructing additional rooms and adding a storey over several Fire Brigade Stations to provide accommodations for Additional Staff ...	12,487 5 7		
Renewing the two blocks of the Butcher's Chawl at the Bandora Slaughter Houses	22,020 5 4		
Construction of A Ward Offices for the different branches of the Engineer's Department at Mint Road	19,984 3 6		
Acquisition of land and properties at Jail Road, North, for the construction of stables and chawls for the Health Department	1,92,581 0 0		
Purchases of about 4,030 square yards of land at the junction of Bapty Road and Falkland Road belonging to the tramway authorities... ...	1,21,505 0 0		
Construction of Buildings for Primary Schools	.....		
Making alterations in the three permanent Wards of the Arthur Road Hospital, and in gas and other lighting arrangements in the Compound, Wards, &c., in the Arthur Road Hospital	21,238 7 6		
Construction of a Fire Brigade Station at Elphinstone Bridge Road ...	50,329 7 1		
Construction of two additional chawls for biggaries at Chembur	28 11 10		
		5,55,446 2 7	
Executed out of Savings on different Loans—			
Providing living and other accommodation at the Gowalia Tank Road, Babula Tank, Chinchpokli and Sankli Tank Fire Brigade Stations ...	12,527 2 2		
Constructing Lascars' quarters, &c., at Gowalia Tank Fire Brigade Station.	8,983 1 10		
Latrines at Colaba	20,290 13 10		
Constructing new Quarters for an Engineer and 10 Lascars at Sankli Tank Fire Brigade Station	13,537 13 11		
Portion of Cost of Site for the Colaba Market	28,060 0 0		
Currey Road Market	15,252 5 10		
Market at Chowpati	63 0 0		
Health Department Stables in F & G Ward...	68,120 8 2		
Market at Elphinstone Road	15,242 13 8		
Construction of a Cook-room in connection with the existing Engineer's Quarters and two Nahanis in connection with the Lascars' Quarters at Sankli Tank Fire Brigade Station	1,382 10 3		
Health Department Biggaries' Chawl at Bori Bunder	50,058 0 7		
Constructing a chawl of 52 rooms at the Bandora Slaughter Houses ...	31,240 0 8		
Providing Latrines and Urinals at different places	56,920 2 10		
Providing accommodation, &c., for the General Stores	38,253 5 5		
Acquisition of land at Colaba as a Site for Quarters for Halalkhores ...	4,312 15 5		
Providing wooden racks in Block No. 2 of the Central Stores Building at Chinchpokli	2,495 5 4		
Market at Kamatipura	50,644 11 2		
Constructing office quarters and store-room for S. and B. Branch in G Ward at DeLisle Road on the site of Forra Tank	19,391 14 9		
Construction of an additional storey over the Bhuleshwar Fire Brigade Station	6,902 12 3		
Construction of 11 Urinals on Port Trust ground near the Docks ...	6,502 13 2		
		4,50,162 7 8	
Advances from Surplus Balances—			
Construction of two additional chawls for biggaries at Chembur ...	17,094 1 0		
Construction of 25 bathing places in the City	20,505 12 3		
Construction of buildings for Primary Schools	1,22,729 14 4		
Building a new office for the use of F and G Ward Offices at Dadar and converting the existing Ward Office into a godown and providing latrines for the workmen	3,340 2 4		
Construction of A Ward Offices for the different Branches of the Engineer's Department at Mint Road	872 3 0		
Making alterations in the three permanent wards of the Arthur Road Hospital and in gas and other lighting arrangement in the Compound, Wards, &c., in the Arthur Road Hospital	717 3 3		
Construction of a Fire Brigade Station at Elphinstone Bridge Road .	12,279 6 4		
Purchases of about 4,030 square yards of land at the Junction of Bapty Road and Falkland Road belonging to the tramway authorities ...	1,223 6 0		
		1,78,762 0 6	
Total for A			67,76,442 1 0
		Carried over Rs. ...	67,76,442 1 0

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			67,76,442 1 0
B.—Roads and Bridges—			
Overbridges	1,97,563 0 1		
Foras Road	1,12,418 14 10		
Nowroji Hill Road	57,913 3 0		
		3,67,895 1 11	
44 *Lakhs Sanitary Works Loan*—			
Road from Bellasis Road across Old Race Course (including Establishment Charges)		1,41,500 1 2	
10,08,500 *Miscellaneous Works Loan*—			
Cross Road at Mahaluxmi Station from Clerk Road to Haines Road ...	19,594 4 8		
Road through Nowroji Hill from Elphinstone Bridge to Dongri Street ...	70,089 2 0		
		89,683 6 8	
35 *Lakhs Various Sanitary Works Loan*—			
Roads and Streets in Agripada and elsewhere	15,02,461 2 10		
New Road from Jakeria Bunder Road to Sewree Cemetery...	24,217 15 11		
		15,26,679 2 9	
23¼ *Lakhs Loan*—			
Falkland Road Bridge	15,082 9 4		
Wari Bunder Bridge	1,32,652 0 0		
		1,47,734 9 4	
15¾ *Lakhs Loan*—			
Wari Bunder Road...	2,95,417 14 10		
Victoria Road Extension	30,895 10 4		
		3,26,313 9 2	
15 *Lakhs Loan*—			
Street Improvement in different places...	15,00,000 0 0		
		15,00,000 0 0	
30 *Lakhs Loan*—			
Overbridge at Elphinstone Road, B. B. & C. I. P. Railways...	2,27,741 3 10		
Do. at Arthur Road, G. I. P. Railway...	1,96,719 0 4		
Do. at Currey Road, G. I. P. Railway	5,03,871 6 9		
Do. at Clerk Road, G. I. P. Railway	2,99,390 0 10		
Do. at Do. B. B. & C. I. Railway	54,871 5 9		
Do. at DeLisle Road	5,58,809 5 0		
Establishment, &c., Charges	29,370 2 1		
		18,70,772 8 7	
55 *Lakhs Loans*—			
Construction of a New Road through Cavel from Girgaum Road to Kalbadevi Road up to the Church of Lady of Health	1,30,301 14 0		
Widening of Cruickshank Road and improvement of the corner of Cruickshank and Elphinstone Roads	32,358 1 8		
		1,62,659 15 8	
Executed out of Savings on different Loans—			
Providing and fixing new pattern hydrants for watering and Fire Brigade purposes	50,000 0 0		
Diversion of Arthur Road over the masonry culvert	16,266 11 1		
Acquisition of land at different places as sites for new Roads	26,088 13 3		
Street Improvements in different places	2,40,000 0 0		
		3,32,355 8 4	
B.—Roads and Bridges, carried over Rs. ...		64,65,593 15 7	
		Carried over Rs. ...	67,76,442 1 0

Appendix No. 10-A—*continued.*

	Amount. Rs. a. p.	Total. Rs. a. p.	Grand Total. Rs. a. p.
Brought forward ...			67,76,442 1 0
B.—Roads and Bridges, &c.—*contd.* and brought forward		64,65,593 15 7	
Advanced from Surplus Balances—			
Construction of a 60 ft. road along Tulsi pipe line from DeLisle Road to Dadar Road including S. W. drains and other roads	0 8 0		
Land at Cavel Street	2,641 11 11		
Acquisition of land at Fergusson Road	1,701 7 7		
Do. do. at Hamalwadi	58,139 13 7		
Do. do. at Piru Lane	64,876 14 11		
Do. do. at Goga Street	29,920 13 5		
Do. do. at the Junction of Gun Carriage Street and Thomas Street	4,357 0 0		
Do. do. at King Lane...	13,439 8 3		
Do. do. at Nishanpada Road	610 15 3		
Do. do. at Chunam Kiln Cross Lane	573 13 5		
Do. do. at Old Nagpada Street	1,817 3 11		
Street Improvements in different places	4,00,000 0 0		
Widening of Cruickshank Road and improvement of the corner of Cruickshank and Esplanade Road	7,959 9 1		
Construction of a road from B. B. & C. I. Railway Matunga Station westward to Mahim including Storm-water drains...	58,993 14 3		
Improvement of Worli Road	18,493 12 6		
		6,43,626 13 1	
Met out of the Nesbit Road Invested Fund—			
Nesbit Road Bridge (Portion of Cost)		49,844 8 0	
Met out of the Road Improvement Fund—			
Spent on Special Street Improvements		19,000 0 0	
Total for B... ...			71,78,065 4 8
C—Drainage Works—			
Fort Sewers	78,627 4 8		
Kamatipura Drain	1,91,047 8 10		
Drains in Fanaswadi and Agiary Lane	1,852 12 5		
Brauch Sewers, Bellasis Road	7,108 6 1		
		2,78,635 15 10	
Surface Drainage Works executed out of the 6 Lakhs included in the Government Consolidated Loan and Rs. 8,12,000 included in the 44 Lakhs Loan—			
Widening Love Grove Sluices	1,57,826 7 7		
Culverts under the B. B. & C. I. Railway near Bellasis Road	1,791 0 8		
Khetwadi Survey	5,599 10 0		
Raising Level of Khetwadi Roads	28,355 0 1		
Raising private compounds in Khetwadi	25,356 2 1		
Three branch drains in Khetwadi and storm-water entrances	31,711 15 6		
Intercepting drain in Tardeo District and storm-water entrances ...	1,69,851 10 4		
Making connection between Low-level sewers and new main drains ...	2,610 8 10		
Intercepting drain from Pydhoni to Bellasis Road and Storm-water entrances	3,03,229 3 9		
Enlarging old open main drain	71,318 13 5		
Laying a new 24" main and removing old 24" Tulsi main	74,226 14 0		
Constructing storage reservoir on the Flats and raising levels of manholes and sewers	1,36,225 12 6		
Establishment for the above works	1,21,413 0 0		
Contingencies	63,627 6 11		
Cleaning the Worli Storm-water drain and widening the channels south of the Love Grove sluices	79,610 9 7		
		18,22,134 3 3	
Drainage Loan of 1873—			
Main sewers...	4,92,691 8 2		
Pipe sewers	3,00,746 13 1		
Outfall sewer	2,55,766 10 0		
Kamatipura Drainage	76,471 4 6		
Clerk Road Ovoid sewer	39,259 5 11		
Government Commission charges	5,211 15 9		
Preliminary expenses	13,429 6 5		
Departmental works	1,072 1 8		
Compensation for land	18,831 11 1		
Proportion of repairs to roads (opened for the works)	34,272 14 7		
Miscellaneous charges	22,802 15 7		
Establishment for the above works	1,45,000 0 0		
Contingencies	51,167 7 9		
Repairs to old Main Drain at Falkland Road	2,093 13 5		
		13,58,417 15 6	
C.—Drainage Works, &c., carried over Rs. ...		30,59,188 2 7	
		Carried over Rs. ...	1,39,54,507 5 8

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			1,39,54,507 5 8
C.—Drainage Works, &c.,—*contd.*		30,59,188 2 7	
44 *Lakhs Loan*—			
House connections without privy fittings	6,32,089 1 7		
Shaft ventilators	44,947 0 6		
Closing Storm-water openings in Frere Road Sewer	17,108 9 6		
Queen's Road Intercepting sewer	1,53,969 0 0		
House connection survey	4,561 13 3		
House connections, Kamatipura Drainage	34,977 7 5		
Establishment charges	88,869 0 0		
Pipe sewer from Clare Road along south portion of Haines Road and DeLisle Road	1,14,260 0 7		
Pipe sewer from Parel Workshop to Clerk Road Ovoid sewer	65,793 9 11		
Extension of Clerk Road Ovoid sewer to Parel Road	35,569 8 0		
Ovoid sewer across the Old Race-course	59,746 13 2		
Ovoid sewer from the Crawford Market down Hornby Road to Bazar Gate and thence to the Mint	89,401 11 9		
Establishment	36,309 0 0		
		13,77,596 11 8	
7 *Lakhs Sanitary Works Loan*—			
Adjustment of the extra expenditure incurred on the Queen's Road intercepting sewer	9,633 10 8		
Fort Drainage	3,68,422 5 9		
Establishment charges	39,419 0 0		
New Works at Love Grove Pumping Station...	34,645 9 6		
Construction of a side drain along Wari Bunder Road	4,934 0 1		
Construction of a pipe sewer in certain lanes in Khetwadi	5,282 6 0		
		4,62,337 0 0	
12 *Lakhs Loan*—			
Queen's Road pipe sewer including contingencies	6,09,998 4 2		
Queen's Road house connections	2,95,306 0 9		
Establishment and contingencies	86,132 14 3		
		9,01,437 3 2	
10,08,500 *Miscellaneous Works Loan*—			
Extension of Parel Road Storm-water Drains from Bellasis Road to $\frac{1}{3}$rds the length of Ripon Road	41,106 6 9		
9" Pipe sewer along Bellasis Road, Foras Road and Gilder Street... ...	17,290 8 1		
		58,396 14 10	
2,48,000 *Agripada House Sullage Water-connections Loan*—			
House Sullage Water-connections at Agripada		2,33,533 $\frac{1}{2}$ 10	
85 *Lakhs Various Sanitary Works Loan*—			
Sewer flushing arrangements		13,864 7 3	
23¼ *Lakhs Loan*—			
Pumps and steam engine for the working of the Love Grove Pumping Station	4,63,345 8 6		
Sewerage of Colaba	7,56,419 0 0		
Sewerage of Umarkhadi District	3,53,786 5 9		
Storm-water drains in Moreland, Souter, Club and Gilder Streets ...	79,644 0 2		
Storm-water drains in different places	21,819 11 2		
Storm-water drains in Connaught and Sussex Roads	35,923 15 9		
Miscellaneous extensions and improvements of drains	33,564 6 1		
		17,44,602 15 5	
15¾ *Lakhs Loan*—			
Sewerage of the Mazagon District on gravitation system	3,06,680 0 5		
Sewerage of Malabar and Khamballa Hills on gravitation system	1,31,866 0 1		
Sewerage of Fergusson Road and Chinchpokli District	89,829 8 5		
Raising sewerage in Queen's Road sewer	1,862 0 0		
Sewerage of Old Race-course District on gravitation system	39,039 8 1		
		5,69,077 1 0	
C.—Drainage works, &c., carried over Rs. ...		84,20,031 4 9	
Carried over Rs. ...			1,39,54,507 5 8

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			1,39,54,507 5 8
C.—Drainage Works, &c.—*contd.*		84,20,081 4 9	
25 *Lakhs Loan*—			
Machinery for the sewerage of Parel, the Mazagon, &c., sectional districts..	7,35,520 6 6		
Mazagon District, sectional	3,52,785 4 2		
Storm-water drain from Wellington Fountain *via* Bandstand to the Sea ...	36,778 4 2		
		11,25,083 14 4	
19¼ *Lakhs Loan*—			
Improvements in the road side drains along Bhoiwada Cross Road and new side drains along portions of Dadar Road, &c.	29,856 14 11		
Surface drainage of Kamatipura	83,440 9 2		
Storm-water drain in Tardeo Road	1,56,542 11 3		
Low-level channel from the Tardeo Flats to Worli Point	11,83,726 0 0		
		14,53,566 8 4	
24¼ *Lakhs Loan*—			
Sewerage of the Fergusson Road and Chinchpokli District on the sectional system	2,56,782 14 6		
Sewerage of the Parel District on the sectional system	4 66,372 3 7		
Completion of house drainage connections in different parts of the City ..	7,63,265 2 0		
Difference in the cost of the works proposed by Mr. Santo Crimp in connection with the drainage of the lower parts of the City	1,44,164 9 9		
		16,30,484 13 10	
Second 24¼ *Lakhs Loan*—			
(17) Catchpits on pipe sewers	26,994 14 0		
(17) Catchpits on ovoid sewers	43,165 13 4		
Sewerage of the Malabar Hill District—Sectional	6,59,948 0 0		
Construction of a new out-fall at Worli Point	7,507 8 9		
Sewerage of the Elphinstone reclamation	46,810 10 2		
		7,64,426 14 3	
35 *Lakhs Loan*—			
Construction of Storm-water drains in Marine Lines, from the northern end of the B. B. & C. I Ry. Office to the Junction of 1st Marine Lines	18,177 10 10		
Providing an additional Pipe Sewer and Ejector in Fergusson Road near its junction at DeLisle Road (*North*)...	70,071 10 9		
Construction of a Storm-water drain in Arthur Road from its junction with Kalachowki Road to Jacob Circle	65,453 14 7		
Extension of Low Level Channel No. 2 from DeLisle Road to Dadar Road	2,56,098 7 3		
Constructing a Storm-water drain in Colaba Causeway between Ormiston Street and Thomas Street	8,538 5 0		
Construction of a Storm-water drain in DeLisle Road (*North*)	48,396 3 3		
Provision of Ejectors in the Colaba Sub-District	80,241 3 8		
Construction of a Storm-water drain in DeLisle Road (*South*)	15,257 13 3		
Extending the existing Storm-water drain and constructing water gallies and water tables in Mazagon Road	4,921 11 1		
Constructing a Storm-water drain in New Purbhadevi Road	33,746 5 0		
Constructing Storm-water drains in Khetwadi Back Road	25,650 3 11		
Constructing a Storm-water drain in Queen's Road from Wodehouse Road Bridge to Band Stand	11,086 9 4		
Constructing a Storm-water drain in Mayo Road from Queen's Statue to Church Gate Street	9,192 11 8		
Constructing a Storm-water drain in DeLisle Road, north of Arthur Road.	44,502 3 0		
Constructing a Storm-water drain in Mayo Road from Church Gate Street to Band Stand	21,182 3 3		
Measures for relieving the Surcharging of Sewers	9,71,333 0 4		
Construction of a Storm-water drain from the junction of Reay and Connaught Roads to the Harbour near Lakri Bunder	1,53,642 7 11		
Construction of a S. W. Drain in DeLisle Road, south of Arthur Road ...	29,371 15 10		
Construction of a S. W. Drain in Elphinstone Road West	12,771 5 2		
Construction of a S. W. Drain in Ghorupdeo Road	17,354 2 3		
Construction of a S. W. Drain in Mugbhat Lane	8,021 15 6		
Construction of an office for the Drainage Staff and quarters and an office for the Head Plumber at Babula Tank and providing fencing round the Drainage Chowkey and metalling the yard	36,007 2 1		
Construction of 2 new Drainage Chowkies at Bapty Road and Churney Road	13,783 15 6		
		19,49,103 4 5	
Executed out of savings on different Loans—			
Slab drain 18" × 18" in Store Lane, Homji Street	2,557 2 6		
Pipe sewer in Currey Road	2,595 15 5		
Main sewerage of Parel	22,121 7 8		
Arching over with brick masonry the main drain at the Arthur Road Crossing	15,655 0 4		
Executed out of savings on different Loans continued and carried over. Rs.	42,929 9 11		
C.—Drainage Works, &c., carried over Rs. ...		1,58,42,696 6 11	
		Carried over Rs. ...	1,39,54,507 5 8

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			1,39,54,567 5 8
C.—Drainage Works, &c.—*contd.*		1,53,42,696 6 11	
Executed out of Savings on different Loans—contd.	42,929 9 11		
9″ pipe sewer at Lalwadi	2,087 8 2		
Laying branch pipe sewers in the village of Parel	17,527 13 11		
Ovoiding side drains to the north of Kalachowki Road	2,600 4 3		
Completing the storm-water drain from the top of Bazar Gate Street to the Salvation Army Hall, Hornby Road	14,460 2 7		
Sewerage of Parel on the gravitation system	62,081 1 5		
Storm-water drain in Cruickshank Road	17,337 6 0		
Laying a 9″ pipe for the carriage of storm-water to the Sea from the eastern half of Wodehouse Road	1,992 1 3		
Laying a 9″ pipe-line at the Parel village	878 7 3		
Storm-water drains in part of Gilder Street and Foras Road from Grant Road to Falkland Road	10,781 14 10		
Constructing a catch-pit on the Mint Road sewer opposite the European General Hospital	4,880 10 8		
Altering and ovoiding storm-water drain in Girgaum	11,348 14 10		
Construction of a storm-water drain in Khetwadi	52,662 2 8		
Draining the storm-water from the public road round the Mahaluxmi Dhobiwada	1,156 0 3		
Ovoiding and regrading the open roadside drains in Umarkhadi Road ...	3,119 0 11		
Converting the old Engine-house at Love Grove into an office and godown and constructing a shred-lifter chamber with 4 shred-lifters	25,031 4 1		
Tidal flaps on flushing drains for ovoid sewers	2,235 4 4		
Drainage arrangements at Tardeo Road	2,292 0 8		
Laying a 9″ pipe sewer in Fergusson Cross Road	2,261 14 9		
Masonry drain from Girgaum Road and passing through Night-soil Depôt	21,317 6 7		
Opening out the public water-course behind Mr. Cama's property at Parel Road	3,962 6 7		
Laying a 12″ pipe from the emergent reservoir to manhole in Apollo Street	3,169 7 8		
Storm-water drains in different places	34,904 7 9		
Ovoiding and constructing masonry side drains in different places	17,895 11 11		
Ovoiding and constructing masonry side drains on Carroll Road, north side	2,711 3 3		
Ovoiding Kutcha drain in Arthur Road as far as G. I. P. Railway Crossing	4,988 15 1		
Constructing storm-water drains and ovoiding and constructing masonry side drains in different places	20,493 10 8		
Automatic flush tanks on pipe sewers	38,434 0 10		
Improving side drains, Malabar Hill	7,672 13 6		
Storm-water drains at Fergusson Road from DeLisle Road to the water-course (3,200 feet) west of the road	29,964 4 9		
Providing and constructing masonry side drain in Malabar Hill	7,346 11 0		
Providing and constructing masonry side drains (*a*) on Naigaum Cross Road on both sides from Vincent Road to Dadar and (*b*) east and west of Ghorupdeo Road	5,239 5 6		
Storm-water drain running on the west of the G. I. P. Railway Dadar Station	7,023 6 9		
Constructing quarters for workmen at Love Grove Air Compressor Station (including purchase of land and an old chawl)	21,961 1 5		
Constructing additional quarters for Lascars at Love Grove	5,477 9 6		
Cutting out rocky barriers in the channel at Love Grove	116 6 0		
Surface Drainage in Queen's Road between the level-crossing and Charni Road	2,807 15 0		
Ovoiding and regrading the side drain in Imamwada from Parel Road to Jail Road, North	2,089 3 10		
Masonry Storm-water Drain 18″ × 18″ in Apollo Street	1,888 15 9		
Open ovoid drain on the east side of DeLisle Road	1,567 14 10		
Zinc ventshafts on pipe sewers in the Fort Sewerage District	11,165 8 9		
Storm-water drain in Sankli Street	11,529 15 8		
Cost of obtaining advice from Mr. Santo Crimp, in regard to House connections, &c.	11,992 9 10		
Construction of permanent manholes over drains	37,950 5 7		
Masonry side drains at Malabar Hill from Gowalia Tank Road to the Government House	7,805 4 2		
Tidal flaps on the ovoid sewers	11,025 14 0		
Construction of a coal shed, a coal tramway, and fence round the compound of the Love Grove Air Compressor Station	11,211 10 9		
6″ Pipe Drain in DeLisle Road	430 10 7		
6″ Pipe Drain in Banganga Cross Lane	824 15 8		
Extension of the 15″ sealed sewage main in Fergusson Road from the Culvert to Worli Road	11,466 8 10		
Laying a 6″ pipe drain in Tulsirampada in Parel Chawl Road	1,051 12 0		
Executed out of Savings on Different Loans continued and carried over Rs.	6,33,852 0 9		
C.—Drainage Works, &c., carried over Rs. ...		1,53,42,696 6 11	
Carried over Rs. ...			1,39,54,567 5 8

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward			1,39,54,507 5 8
C.—Drainage Works, &c.—*contd.*		1,58,42,696 6 11	
Executed out of Savings on different Loans—contd.	6,38,852 0 9		
Laying a 6" pipe drain in the private passage known as Kalachowki Cross Lane	602 14 7		
6" Pipe Drain in the passage to the north of Parel Cross Lane	472 10 8		
Connecting certain properties in Gilder Street with the new storm-water drain constructed thereat	1,496 13 1		
Laying a 9" stoneware pipe drain in a portion of Foras Road, west of Carroll Road	1,365 13 11		
Laying a 6" pipe drain in the passage belonging to Sulleman Jusab at Belvedere Hill Road	647 8 2		
Laying a 6" pipe drain in Bapty Road	486 15 2		
Laying a 9" pipe drain at Tank Bunder, Koliwada	2,042 13 3		
Construction of a catchpit on the Queen's Road ovoid sewer in Charni Road, &c.	6,202 0 4		
Laying a drain at Mr. Tribhowandas Varjivandas' Oart at Girgaum Back Road	254 13 2		
Storm-water drain in Ripon Road from Agripada drain to Jacob Circle ...	27,086 12 11		
Storm-water drain in Clerk Road from Parel Road to Jacob Circle...	26,900 9 11		
Storm-water drain in Haines Road from Khatao Makanji's Mill to Jacob Circle	48,844 13 3		
Laying a branch 6" pipe sewer at DeLisle Road	761 5 7		
Laying a 6" pipe drain at Ghorupdeo Road	404 6 3		
Laying a 9" pipe sewer along Elphinstone Road at its Junction with Parbhadevi Road	1,112 5 3		
Laying a 9" pipe drain with Inspection Chamber at the passage running through Chamarbag properties	3,938 8 10		
Giving Street connections to storm-water drains in the City	13,935 14 9		
Laying a 6" pipe drain on the Tulsi main road	1,000 9 1		
Laying a 6" pipe drain at Ghorupdeo Road, 1st Cross Lane	350 14 10		
Constructing a storm-water drain at Kalachowki Road	789 2 3		
Laying a 6" pipe drain along Chamarbag properties in Parel Road ...	1,166 0 8		
Laying a pipe sewer between Forjett Street and Tardeo Road	2,409 10 2		
Fees to Mr. Midgley Taylor on account of his report on the Ejector, &c., required for Sectional District	1,961 1 4		
Establishment for the preparation of plans and estimates for the sewerage of Mazagon, Parel and Old Race Course Districts	10,388 0 0		
Tracing the plans and sections of the Parel, Mazagon and Old Race Course Districts	658 15 0		
Fees to Messrs. Midgley Taylor and G. R. Strachan for their opinion on matters connected with the surcharging of sewers...	16,796 13 4		
Expenses incurred by Mr. James in connection with inquiries in regard to Lierner system, &c.	1,634 3 0		
Construction of a storm-water drain in Church Gate Street from its junction with Mayo Road to the main storm-water drain in Queen's Road near the Church Gate Street	4,033 9 5		
Laying a 6" pipe sewer in the passage opening to Portuguese Church Road	227 4 3		
Laying a 6" pipe drain at Madanpura	346 4 2		
Extension of the 15" sealed sewage main from the Chinchpokli Fire Brigade Station to the head manhole on Clerk Road sewer	12,408 4 9		
Constructing a storm-water drain in Colaba Causeway between Mayo Road and Thomas Street	8,973 9 11		
Preparation of certain models for improvement of main sewers, &c. ...	200 0 0		
Laying 6" pipe drain in the passage behind the New Building of Mr. Hormusji Vakil	5,226 13 4		
Laying a 6" pipe drain in the passage leading to the Hon'ble Mr. Setalvad's Bungalow	1,244 3 6		
Laying a 6" pipe drain in the Nepean Sea Road	1,243 11 7		
Laying a 9" pipe drain at Elphinstone Road	6,761 10 9		
Extending the existing 6" pipe drain in the passage off Dadar and Kumbharwada Cross Lane	33 7 10		
Laying a 6" pipe drain in the passage at Currey Road	471 10 2		
Laying a 9" pipe drain in the passage leading to Government Gate Road, Parel	2,139 0 6		
Laying a 4" C. I. pipe drain from DeLisle Road to the boundary of the Century Mill premises	4,816 3 10		
Providing an additional pipe sewer and Ejector in Fergusson Road near its junction at DeLisle Road (North)	8,000 0 0		
Laying a 6" pipe sewer in the passage near the Lunatic Asylum, Colaba ...	1,364 5 4		
Laying a branch drain in the passage off Mount Pleasant Road	737 10 6		
Laying a 6" pipe sewer at Banganga Tank Lane	929 8 9		
Laying a 7" pipe drain on the eastern boundary of the Babula Tank ...	1,321 9 2		
Laying a 6" pipe drain in Gowalia Tank Road	337 11 9		
Laying a 6" pipe drain at Victoria Bunder Road	367 11 6		
Laying a 9" pipe drain in Kamatipura, 9th Street	562 1 2		
Laying a 6" pipe drain in the Lane behind No. 49-51, Warden Road ...	1,610 10 10		
Executed out of the Savings on different Loans carried over ...	8,70,921 7 1		
C.—Drainage Works, &c., carried over ...		1,58,42,696 6 11	
Carried over Rs. ...			1,39,54,507 5 8

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			1,39,54,607 5 8
C.—Drainage Works, &c.—*contd.*	.....	1,53,42,696 6 11	
Savings—Brought forward	8,70,921 7 1		
Laying 6" pipe drain at Warden and Tardeo Roads	480 3 6		
Laying 6" pipe sewer in the compound of premises No. 14-20 to the east of Cumballa Hotel Lane	509 7 7		
Laying a 6" pipe drain in the passage leading to Khed Tank in the north of Elphinstone Road	1,027 11 3		
Laying a 6" pipe drain in the passage to the east of Cumballa Hotel Lane	834 6 2		
Laying a 6" pipe drain at Nepean Road	978 13 7		
Colaba Sewerage Work	44,836 14 11		
Sewerage of the Malabar Hill District	7,894 12 2		
Laying a 4" air main in Victoria Extension Road from the junction of Victoria Road and Mount Road to Ejector Station No. 2, Mazagaon, in place of the existing 2½" C. I. main	4,320 0 2		
Construction of a sealed sewage main from the Elphinstone Road Ejector Station to Worli Road	68,326 11 1		
Constructing a masonry drain with four manholes and eight half-sized water entrances at DeLisle Road	6,351 8 10		
Filling in the open side drains on both the sides and providing covered storm-water drains with water tables and water gullies in portions of 1st to 5th Khetwadi Lanes and Main Roads	883 3 3		
Filling in old side drains and providing a covered drain with manholes, full-sized and half-sized water entrances, with water tables on 14th Khetwadi Lane	3,104 6 3		
Providing strom-water drain with water entrances and water tables at 11th Khetwadi Lane	3,184 12 1		
Constructing a road-side drain and providing a covered storm-water drain at Girgaum Back Road	12,642 14 9		
		10,25,797 4 8	
Balances from Surplus Balances—			
Extension of low-level Channel No. 2 from DeLisle Road to Dadar Road.	20,495 6 6		
Measures for relieving the surcharging of sewers	3,33,894 15 6		
Construction of an office for the Drainage Staff and quarters and an office for the Head Plumber at Babula Tank site and providing fencing round the Drainage chowkey and metalling the yard	674 11 10		
Provision of Ejectors in the Colaba Sub-District	9,998 15 6		
Construction of a storm-water drain from the junction of Reay and Connaught Roads to the Harbour near Lakri Bunder	4,02,832 12 8		
		7,67,896 14 0	
Total for C Drainage ...			1,71,35,890 9 7
D.—Water Works—			
Vehar Lake (value of)		45,21,943 7 9	
Tulsi Water Works	37,61,888 6 0		
Vehar Outlet Tower	2,38,111 10 0		
		40,00,000 0 0	
Drainage and Water Works Loan of 1878—			
Service Reservoir at Bhandarwada		10,16,830 13 3	
44 *Lakhs Sanitary Works Loan*—			
Tulsi gathering ground	60,000 0 0		
Malabar Hill Reservoir	4,00,000 0 0		
New hydrants, including cost of erection	20,876 7 1		
Tulsi gathering ground	34,500 0 0		
Construction of a double-storeyed chawl for the Water Works staff and quarters for the Superintendent	29,182 3 3		
Survey of new catch-water channels, &c.	7,838 4 1		
Construction of filter beds at Vehar	1,04,433 15 11		
Improvement of the water-supply of the outlying districts	6,82,065 0 8		
Raising the Tulsi dams	1,13,257 9 7		
Providing additional catch-water channels at Vehar and Tulsi	91,794 0 6		
Purchase of check meters for the prevention of waste of water	1,27,132 14 8		
Enlarging different mains	1,03,130 8 6		
Cost of new water mains from Nesbit Road to Babula Tank	15,000 0 0		
Establishment charges	80,770 0 0		
Portion of excess cost of Vehar Outlet Tower—debitable to this Loan ...	23,684 11 9		
Provision of turbine at the Malabar Hill Reservoir	2,282 0 0		
		18,95,947 12 0	
7 Lakhs Sanitary Works Loan—			
Malabar Hill Reservoir (extra cost)	1,14,089 2 6		
Increasing and improving the distribution of the water-supply and providing higher levels, Tulsi District, with filtered water	20,211 8 4		
Portion of excess cost of Vehar Outlet Tower	7,990 10 6		
		1,42,241 5 4	
12 Lakhs Drainage and Water Works Loan—			
18" main in Frere Road from the Bhandarwada Reservoir to Carnac Road and 12" main from Carnac Road to Mint		80,031 5 0	
10,08,500 Miscellaneous Works Loan—			
Concrete trench, waste weir, Vehar Lake	30,608 7 1		
Mains in 14 streets west of Frere Road and other mains in various places.	59,275 1 8		
Arthur Road connection works necessitated by the laying of the Tansa 27" main	9,542 10 5		
Deacon's meters	16,788 0 0		
		1,16,214 3 2	
Works, &c.—Carried over ...		1,17,73,208 14 6	
		Carried over Rs. ...	3,10,90,397 15 3

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a p.	Rs. a. p.	Rs. a. p.
Brought forward ...			3,10,90,397 15 3
D.—Water Works, &c.—*contd.*		1,17,73,208 14 6	
35 *Lakhs Various Sanitary Works Loan*—			
Providing an asphalt surface to the floor of the settling basin of the Malabar Hill Reservoir and other works in connection therewith ...	92,872 9 2		
Pawai Water Works	6,60,479 6 9		
Additional Water Mains	98,386 0 10		
Extension of Tulsi Catch-water Channel	20,836 9 1		
		8,72,574 9 10	
147 *Lakhs Tansa Loan*—			
Tansa Water Works including cost of survey		*1,46,96,383 7 0	
16¾ *Lakhs Loan*—			
Improvements of the outlet towers at Vehar and Tulsi		12,842 13 10	
25 *Lakhs Loan*—			
9″ Main from Ghorupdeo Road to Jackeria Bunder Road and 6″ Main from thence to Sewri Cemetery Road...	27,892 4 7		
New mains in Reay Road, &c.	1,042 5 0		
Main along Kalachowki Road from Parel Road to Ghorupdeo Road and along Reay Road from Kalachowki Road to Bhandarwada Reservoir ...	1,26,969 12 8		
9″ Service main connected at one end with the Bhandarwada Reservoir and at the other with the Sewri Road 12″ main and supplemented midway by a 9″ service main down Connaught Road	48,364 0 5		
		2,04,268 6 8	
23¾ *Lakhs Loan*—			
Extension of water mains in various places	28,026 6 5		
Further alterations and improvements at the Malabar Hill Reservoir ...	29,971 14 8		
Covering storage basin at the Bhandarwada Reservoir and constructing filters over it	91,052 13 0		
Road from Vehar to Tulsi with a light tramway to carry pipes	471 3 6		
		1,49,522 5 7	
24½ *Lakhs Loan*—			
9″ and 10″ pipes from Grant Road to Kamathipura	6,869 2 4		
Distribution mains in Tardeo and Gamdevi Roads	7,277 5 7		
Mains from 48″ Tansa main at Chinchpokli to Grant Road and 32″ main from Grant Road to Malabar Hill	2,10,000 0 0		
32″ outlet mains from Malabar Hill to Chowpati	30,000 0 0		
		2,54,146 7 11	
12¾ *Lakhs Water Works Loan*—			
Construction of additional filters at the Malabar Hill Reservoir	2,45,319 9 2		
Replacement of the Vehar main for the whole distance between Vehar and Coorla, north of Coorla	4,54,682 0 2		
Removing and relaying the 32″ Vehar main, south of Coorla	†2,00,000 0 0		
Water mains in connection with the Improvement Trust Schemes—			
9″ and 4″ mains in the new roads in the Agripada District	43,790 0 4		
4″ main in New Street near Lohar Chawl	2,531 10 0		
Mains in the 1st Nagpada Scheme	6,731 6 1		
4″ main along Wodehouse Road...	2,426 2 11		
4″ main in Sankli Street	1,140 11 7		
4″ main in Connaught Road Estate	1,666 9 8		
		9,58,238 1 11	
55 *Lakhs Loan*—			
48″ Tansa main at Chinchpokli to Grant Road and 32″ main from Grant Road to Malabar Hill	47,629 7 1		
32″ Outlet mains from Malabar Hill to Chowpati	16,622 14 6		
Laying new water mains and fixing hydrants in the roads, "City Improvement Scheme No. IV."	30,743 12 5		
Laying water mains in B Ward	71,566 11 8		
Laying water mains on the Colaba Reclamation	36,269 2 0		
	.....		
55 Lakhs Loan—Carried over ...	2,02,831 15 8		
D—Water Works, &c.—Carried over ...		2,39,21,185 8 3 Carried over ...	3,10,90,397 15 3

* Exclusive of Rs. 2,40,000 paid out of the Premia received on the Loan

† Exclusive of Rs. 3,74,000 paid from the contribution received from the G. I. P. Railway Co.

Appendix No. 10-A—*continued.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			3,10,90,397 15 3
D.—Water Works, &c.—*contd.*...		2,89,21,185 3 3	
55 Lakhs Loan—Brought forward	2,02,831 15 8		
Laying water mains in A Ward	.....		
Construction of quarters for Water Works Office Staff on the Babula Tank Site	.....		
Laying a 9″ main along Mount Road from its junction with Love Lane to the junction at Victoria Road and a 6″ main along Ghorupdeo Road to be joined to the 6″ main already laid in Albert Road...	15,972 15 0		
Laying an additional 9″ main on the 24″ main, somewhat north of Government House, Parel, to join the 4″ main in Lady Jamsetji Road...	12,973 2 0		
		2,31,778 0 8	
Works executed out of Savings on Loans—			
Renewal of water mains in the Girgaum District for improvement of the water supply	48,390 2 11		
15″ water main from 24″ main in Bholwada to Elphinstone Road as far as new Parbhadevi Road and thence a 9″ main to the Century Mill ...	49,452 0 2		
New mains in various places	28,803 1 1		
Covering storage basin at the Bhandarwada Reservoir and constructing filters over it	44,597 14 4		
Excess cost of Worli Road main...	21,696 4 1		
Residence of the Chief Inspector, Water Works, at Babula Tank Road, and rooms for 6 sluicemen	32,028 1 3		
24″ and 27″ mains from Malabar Hill Reservoir to Frere Fountain, Fort...	50,093 1 2		
Connections at Chinchpokli between Tansa and Vehar mains	7,402 1 4		
Laying water mains in Wellington Lines	4,397 9 5		
Do. do. in A Ward	12,943 13 1		
Renewing 3″ main in B Ward with 4″ pipes—extra cost chargeable to Capital	4,533 3 4		
Replacing 32″ Vehar pipes for 1½ miles by 48″ C. I. pipes (north of Coorla).	2,88,978 7 9		
9″ main in DeLisle Road	9,849 6 1		
4″ main in Khara Talao Road	2,774 11 7		
Providing the trunk water mains with Venturi water meters	23,000 0 0		
Laying water mains in B Ward	17,213 12 8		
Extending the existing 9″ main in the Agripada District along Gilder Street to join the existing 32″ main in Grant Road	11,904 13 6		
Extending the existing 9″ main in DeLisle Road to join with 15″ main in Elphinstone Road	8,983 12 0		
Travelling expenses to an Inspector and a lascar for taking survey, &c., in connection with the storage reservoir and filter beds at Ghatkoper ...	35 0 6		
Constructing office, quarters and store-rooms for W. W., G. Ward, at DeLisle Road on the site of Foras Tank	19,415 3 11		
Extending the 9″ main laid along the bank of the drainage channel across the proposed Foras Road from the Century Mill to join the existing 9″ main at Worli	4,092 4 11		
		6,85,579 13 1	
Advanced from Surplus Balances—			
32″ Outlet main from Malabar Hill to Chowpati	*Cr.* 700 0 0		
Laying a 6″ main in New Mathew Road	.....		
Providing the trunk water mains with Venturi water meters	.....		
Laying water mains in A Ward	1,07,384 10 0		
Laying water mains in B Ward	28,040 13 11		
Laying an additional main, 9″ in diameter, running due West from a point on the 24″ main somewhat north of Government House, Parel, to join the 4″ main in Lady Jamsetji Road	121 8 0		
Two dead-ends of the 4″ main in Wari Bunder Road to be connected by a 6″ main	.....		
Replacing 2″ main in Mughbhat Cross Lane by a 5″ main	.....		
3″ main in Gunpowder Road to be replaced by a 5″ main and extended to join the 9″ main in Reay Road	.....		
Replacing 3″ water main in Mazagon Road by a 5″ main and extending it to join the 4″ main in Wari Bunder Road	.....		
Laying a 6″ Riding main in Cowasji Patel Tank Road	.....		
Fixing Deacon's meters on the distributing mains	17,721 6 6		
Removing and relaying the 32″ Vehar main south of Coorla (pending realisation by the sale of old pipes and lead)	12,609 11 8		
Replacing 3″ water main in Mahomedan Street at Ripon Road by a 5″ main	.....		
Connecting up the dead-end of the 4″ main in Kakadwadi Lane with the main in Girgaum Back Road	.....		
Extending 32″ main in Parel Road northward through DeLisle Road ...	1,218 3 10		
Connecting 12″ main in Fergusson Road to 32″ Vehar main in DeLisle Road	599 15 10		
Connecting a 5″ Service main in Sandhurst Road	26,460 7 10		
Substitution of electrically driven Turbine Pump for plunger pumps and construction of a Water Tower on Malabar Hill Reservoir	2,203 3 2		
Improvement of water supply in Mahim District (12″ main in Jambli Tank Road)	34 8 0		
		1,95,684 8 9	
D.—Water Works, &c.—Carried over ...		3,00,34,227 9 9	
		Carried over ...	3,10,90,397 15 3

Appendix No. 10-A—*contd.*

	Amount.	Total.	Grand Total.
	Rs. a.	Rs. a. p.	Rs. a. p.
Brought forward ...			3,10,90,397 15 3
D.—Water Works, &c.—*contd.*		3,00,34,227 9 9	
Paid out of the Worn-out Water Mains Renewal Fund—			
Laying a 9″ main along Mount Road from its junction with Love Lane to the junction at Victoria Road and a 6″ main along Ghorupdeo Road to be joined to the 6″ main already laid in Albert Road	6,446 14 1		
Laying a 6″ main in Matarpakhadi and a 12″ main along Mazagon Road from Nesbit Lane to Mount Road	5,696 15 4		
Cost of renewing 3″ main in Worli Road with 9″ pipes (chargeable to revenue)	26,517 3 9		
Replacing 3″ main in Zaoba's Oarts by a 4″ one ... ... — ...	672 7 6		
Mains in the 1st Nagpada Sehame	1,645 6 0		
Replacing the 5″ main in Janjikar Street and 3″ and 4″ main in Old Hanuman Lane by a 6″ main	4,359 1 2		
4″ main in New Street near Lohar Chawl	2,168 15 11		
Replacing 3″ main in Foras Road by a 6″ main	3,427 0 0		
Replacing the 3″ main in Chunam Kiln Road by a 5″ main	998 14 10		
Replacing a 3″ water main in Mazagon Road by 5″ main, &c.	2,133 4 1		
Laying water mains in A Ward	54,240 8 2		
Laying water mains in B Ward	44,798 14 0		
Replacing a 3″ water main in Mughbhat Cross Lane by a 5″ main ...	924 5 9		
Laying 3″ main in Gunpowder Road to be replaced by a 5″ main, &c., &c.	1,730 5 8		
6″ water main in Soparibag Road from the Junction of Parel Govt. Gate Road with Elphinstone Road	8,838 15 3		
Laying a 9″ main in Cawasji Patel Street	2,817 1 10		
Replacing 3″ main in Hazria Street by a 5″ main	1,141 9 8		
Laying 3″ and 4″ mains in Kamatipura Bazar Road by a 6″ main ...	2,447 1 6		
Replacing 3″ water main in the Mahomedan Street at Ripon Road by a 5″ main	1,266 1 4		
Replacing 3″ main in Bapu Khote Street by a 5″ main	1,186 8 0		
Replacing the 3″ pipe in Arthur Road by a 6″ one and extending it so as to join the 6″ main in Kalachowki Road	551 2 8		
Laying a 12″ main from the Tulsi Pipe line to Worli Road in place of the 6″ main in Fergusson Road	4,146 5 6		
Laying a 5″ water main in place of the existing 3″ main in Fanaswadi ...	1,352 1 0		
Laying a 5″ main in Tank Street	681 5 0		
,, 4″ ,, ,, Sheik Burhan Street	329 1 11		
Replacing 4″ ,, ,, by a 6″ main in Love Lane	2,718 9 8		
		1,82,786 3 7	
Total for D ...			3,02,17,013 13 4
E.—Cemeteries (*Burning and Burial Grounds*)—			
15¼ *Lakhs Loan*—			
Burial ground for Mahomedans and Beni-Israels		2,11,652 4 5	
19½ *Lakhs Loan*—			
Purchase of two sites of land for burning and burial grounds at Mahim and Worli, including cost of enclosure walls, &c.		47,680 4 4	
25 *Lakhs Loan*—			
Purchase of land from Mr. Ashburner for extension of burial ground for Mahomedans	1,17,046 0 6		
Purchase of land in Narielwady for future extension of burial ground for Mahomedans	1,66,577 5 10		
Extension of burial ground at the Sewri Cemetery	71,640 9 8		
		3,49,264 0 0	
55 *Lakhs Loan*—			
Providing a burial ground at Haines Road for the Portuguese Community	26,949 12 7		
Providing a burial ground for Mahomedans in F and G Wards at Antop Hill, Matunga	25,309 0 0		
Extension of the Sewri Cemetery	11,858 13 3		
		64,117 9 10	
Executed out of Savings on different Loans—			
Filling in the portion of the Haines Road Cemetery	9 8 0		
Providing a boundary wall at the Haines Road Cemetery	4,732 2 4		
		4,741 10 4	
Advances from Surplus Balances—			
Extension of the Sewri Cemetery	19,269 15 2		
Providing a burial ground for Mahomedans in F. and G. Wards at Antop Hill, Matunga	568 7 4		
		19,838 6 6	
Total for *E.* ...			6,97,294 3 5
		Carried over ...	6,20,04,706 0 0

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Appendix No. 10-A—*concluded.*

	Amount.	Total.	Grand Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...			6,20,74,706 0 0
F.—Disposal of Town Sweepings—			
35 *Lakhs Loan*—			
Purchase of land on the Flats required for the disposal of town sweepings.		1,98,913 8 8	
23½ *Lakhs Loan*—			
Purchase of land on the Flats for the deposit of kutchra		5,890 14 1	
25 *Lakhs Loan*—			
Disposal of town sweepings at Deonar		7,34,000 0	
19¼ *Lakhs Loan*—			
Extra cost of the scheme for the disposal of town sweepings at Deonar ...		53,619 13 4	
Executed out of savings on different Loans—			
20 additional wagons for the disposal of town sweepings		38,684 2 0	
Total for *F* ...			10,84,108 6 5
G.—Miscellaneous—			
19¼ *Lakhs Loan*—			
Purchase of land for the site of the Petit Hall and other charges in connection therewith		1,785 13 10	
55 *Lakhs Loan*—			
Filling in the Babula Tank with debris		56,894 14 10	
Executed out of savings on different Loans—			
Filling in Matarpakhadi Tank at Mount Road...	2,607 5 8		
Filling in Gilder Tank	15,488 9 4		
Filling in the portion of the old water-course situated at the north corner of the Foras Tank and west of Purbhadevi Night-soil Depôt in DeLisle Road	3,506 5 7		
		21,602 4 7	
Advances from Surplus Balances—			
Filling in the Babula Tank with debris...	1,963 0 11		
		1,963 0 11	
Total for *G.* ...			82,246 2 2
Grand Total Rs. ...			6,31,68,060 8 3

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix No. 10-B.

STATEMENT showing the Invested Balances on 31st March 1913 as compared with those at 31st March 1912.

	On 31st March 1912.	On 31st March 1913.	More.	Less.
	Rs a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A.—SURPLUS FUNDS INVESTMENTS ...	38,51,073 2 2	37,98,940 2 5	.....	52,132 15 9
Loan Fund Investments	36,58,394 1 10	21,80,525 14 10	.....	14,77,868 3 0
Rs. ...	75,09,467 4 0	59,79,466 1 3	.....	15,30,001 2 9
B.—SINKING FUND—				
5 per cent. Municipal Loans	53,73,024 7 2	63,28,300 7 7	4,55,276 0 5	.....
4 Do. do. 3½ % basis..	50,43,802 12 1	55,37,910 6 7	4,94,107 10 6	.....
4 Do. do. 3 % basis..	3,88,915 0 0	5,23,768 1 1	1,34,853 1 1	.....
3½ Do. do. ...	2,30,396 2 0	2,49,904 6 6	19,508 4 6	.....
Rs. ...	1,15,36,138 5 3	1,26,39,883 5 9	11,03,745 0 6	.....
C.—SPECIAL FUNDS—				
Municipal Buildings Fire Insurance Fund	1,50,756 2 6	1,67,011 9 2	16,255 6 8	.....
Worn-out Water Mains Renewal Fund	5,39,207 9 3	5,36,515 3 1	.....	2,692 6 2
Net Premia Fund	1,44,916 2 10	2,05,858 8 2	60,942 5 4	.....
Rs. ...	8,34,879 14 7	9,09,385 4 5	77,197 12 0	2,692 6 2
Rs. ...	1,98,80,485 7 10	1,95,28,734 11 5	11,80,942 12 6	15,32,693 8 11
Contractors', &c., Deposits in Government and other Securities	2,71,200 0 0	3,53,800 0 0	82,600 0 0	.....
Total Rs. ...	2,01,51,685 7 10	1,98,82,534 11 5	12,63,542 12 6	15,32,693 8 11

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

Appendix No.
WATER WORKS.

INCOME FOR 1912-13.

INCOME.	Amount. Rs. a. p.	Grand Total. Rs. a. p.
Water Tax and other Miscellaneous Water Works Revenue—vide details in Appendix No. 13 [vide page 109]	* 21,79,849 5 11	
Interest on the Investment of the unexpended balances of the different Water Works Loans ...	† 8,641 1 0	21,79,791 6 11

* This includes Rs. 19,45,338-9-11 being the amount of Water Tax by measurement, realised during 1912-13 as shown in the following Statement :—

STATEMENT showing the quantity of Water by meter supplied under different Sub-heads and the Water Tax by measurement realised thereon at different rates for the uniform quantity of 1,000 gallons.

PARTICULARS.	1907-08.		1908-09.		1909-10.		1910-11.		1911-12.		1912-13.		
	Gallons.	Amount.	Gallons.	Amount.	Gallons.	Amount.	Gallons.	Amount.	Gallons.	Amount.	Gallons.	Amount.	
		Rs. a. p. @ As. 10		Rs. a. p. @ As. 10 & As. 8		Rs. a. p. @ As. 8		Rs. a. p. @ As. 8		Rs. a. p. @ As. 8		Rs. a. p. @ As. 8	
Hotels	2,43,74,976	10,671 15 0	2,62,76,561	11,501 4 1	2,59,51,225	11,360 15 0	2,80,20,119	10,501 3 6	2,37,24,317	11,057 2 6	2,25,46,610	10,266 4 1a	
		@ As. 10		@ As. 10 & As. 8		@ As. 8		@ As. 8		@ As. 8		@ As. 8	
Cotton Factories	32,64,20,744	2,18,518 15 4	47,51,34,115	2,20,776 7 1	49,91,28,143	2,00,009 4 10	47,71,53,142	2,24,676 11 3	44,40,61,597	2,22,030 12 9	51,26,44,206	2,39,922 3 3	For trade purposes.
		@ As. 10		@ As. 10 & As. 8		@ As. 8		@ As. 8		@ As. 8		@ As. 8	
Flour Factories	3,93,84,795	17,217 15 11	1,84,71,988	10,536 15 8	1,57,41,563	4,919 12 5	1,30,54,396	7,302 2 2	1,04,25,093	6,007 10 5	2,10,24,089	10,972 0 6	
		@ As. 10		@ As. 10 & As. 8		@ As. 8		@ As. 8		@ As. 8		@ As. 8	
Other Factories	18,35,29,210	1,15,708 9 1	20,73,66,729	1,04,599 2 6	27,06,22,807	1,11,837 7 8	23,24,10,449	1,16,205 11 7	24,87,30,973	1,24,368 7 11	23,99,53,087	1,25,471 13 6	
		@ As. 8		@ As. 8		@ As. 8		@ As. 8		@ As. 8		@ As. 6 & As. 4	
Milch Cattle Stables ...	4,31,99,070	20,535 5 0	4,62,12,018	20,161 2 7	4,97,31,787	19,622 14 7	4,67,31,155	18,505 1 4	7,18,18,129	27,655 1 1	8,41,29,075	31,478 3 10	
		@ As. 10		@ As. 10		@ As. 8		@ As. 8		@ As. 8		@ As. 6	
Government Buildings (c).	19,09,41,519	69,749 3 3	21,37,32,698	56,193 3 1	21,81,75,978	47,005 4 5	27,86,38,784	46,702 12 4	29,90,24,561	50,854 2 4	24,15,76,744	55,264 6 7a	
		@ As. 11		@ As. 10		@ As. 9		@ As. 8		@ As. 6½		@ As. 6½	
Railways	32,14,85,267	1,21,025 3 10	33,31,38,671	1,22,550 3 4	34,46,40,217	1,24,137 0 3	32,04,47,220	1,21,755 12 9	‡ 28,55,11,052	1,50,054 12 8	‡ 42,87,15,291	1,77,158 10 7½	
		@ As. 7½		@ As. 7½		@ As. 7½		@ As. 6½		@ As. 6½		@ As. 6½	
Port Trust...	15,33,85,169	79,197 4 7	15,33,66,945	81,105 7 11	19,73,79,035	67,005 3 10	15,34,32,994	67,660 14 7	16,04,79,944	65,185 0 2	16,43,94,267	68,305 14 6	
Suburbs (b)	9,96,33,359	74,573 4 5											
		@ As. 7½		@ As. 7½		@ As. 7½		@ As. 6½		@ As. 6½		@ As. 6½	
	10,12,51,958	77,212 2 7	10,94,71,805	82,264 5 4	10,61,21,597	64,219 5 0	13,46,54,183	1,01,782 14 8	12,43,37,140	80,317 14 10c			
Miscellaneous (d)... ...	77,94,33,205	2,47,051 0 1	78,83,05,342	2,37,251 3 11	76,92,57,225	2,15,332 11 7	74,93,21,084	1,90,050 10 2	82,84,29,663	2,16,974 14 8	81,64,61,809	2,16,388 2 7a	
												@ As. 6½	
Total ...	2,10,16,56,199	10,05,232 14 6	2,29,85,21,305	10,59,349 6 6	2,31,51,75,410	10,01,174 0 7	2,27,84,31,605	9,95,965 2 4	2,35,85,01,651	9,96,887 13 1	2,69,71,05,874	10,45,856 8 10	

(a) The rates charged are in accordance with the Water-rates for the respective years.

(b) The rates charged vary from As. 12 to Re. 1.

(c) The rates charged vary from As. 2 to As. 10.

‡ This includes 1,11,000 gallons at the rate of As. 10 per 1,000 gallons, i.e., Rs. 69-6-0 for the year 1909-10.

A, B, C, D. These figures are exclusive of refunds of Rs. 20-12-0, Rs. 14-0-4, Rs. 3,673-4-1 and Rs. 144-9-2 respectively.

Total Rs. ... 21,79,791 6 11

† Vide note at page 113.

R. PEEL,
Acting Chief Accountant.

11.

ACCOUNT.

EXPENDITURE FOR 1912-13.

EXPENDITURE.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
General Superintendence (proportion of) (*vide* page 109) ...	89,313 0 0			
Assessment and Collection Charges (proportion of) (*vide* page 109)	64,950 14 5			
Engineer's Establishment (proportion of) (*vide* page 109) ...	18,414 0 0			
		1,17,677 14 5		
Maintenance of Water Works (*vide* page 111)		3,33,406 13 0		
New Works (*vide* page 118)		62,399 0 2		
			5,13,483 11 7	
Interest on Water Works Loans (Debt)—				
Due to Government—Vehar Debt	.....	91,145 7 0		
Due to the Public—				
Portion of 10 Lakhs for Bhandarwada Water Works of the Loan of Rs. 26,94,000 of 1878	17,149 3 6			
Water Works portion of the 44 Lakhs Sanitary Works Loan (Rs. 18,38,921)	80,358 14 2			
Water Works portion of the 7 Lakhs Sanitary Works Loan (Rs. 1,90,389)	10,474 10 6			
Water Works portion of the 12 Lakhs Drainage and Water Works Loan (Rs. 85,000)	4,211 14 3			
Tansa Water Works Loan of Rs. 147 lakhs	7,52,062 8 0			
Water Works portion of the Rs. 10,08,500 Miscellaneous Works Loan (Rs. 1,35,000)	6,683 1 0			
Water Works portion of the 35 Lakhs Various Sanitary Works Loan (Rs. 9,20,000)	45,349 6 10			
Water Works portion of the 42 Lakhs Loan for repayment of Government Consolidated Loan (Rs. 28,59,760) ...	1,12,881 12 1			
Water Works portion of the 23½ Lakhs Loan for Drainage and other Works (Rs. 2,45,500)	9,787 4 5			
Water Works portion of the 15¾ Lakhs Loan for Sewerage, Wari Bunder, &c., Works (Rs. 30,000)	1,110 10 8			
Water Works portion of the 25 Lakhs Loan for Sewerage, &c., Works (Rs. 2,31,297)	9,271 4 11			
Water Works portion of the 24¾ Lakhs Loan for certain Sewerage and Water Works (Rs. 2,73,000)	10,895 11 9			
12¾ Lakhs Loan for certain Water Works (Rs. 12,75,000) ...	50,850 0 0			
55 Lakhs Loan for Miscellaneous Works (Rs. 4,49,542) ...	9,229 6 5			
		10,99,795 12 4		
		11,90,941 3 4		
Commission to Bank of Bombay for payment of interest on the Water Works portion of the different Loans	4,575 0 0		(a)	
Miscellaneous Loan Charges, including Commission paid to the Bank of Bombay for drawing interest on Sinking Fund Investments	244 2 10	(a)4,819 2 10		
			11,95,760 6 2	
Payments towards the reduction of debt or investment of Sinking Fund of the following Water Works Loans:—				
Vehar Debt	.....	22,330 9 0		
Portion of the 10 Lakhs for Bhandarwada Water Works of the Loan of Rs. 26,94,000 of 1878	.....	41,388 4 4		
Water Works portion of the 44 Lakhs Sanitary Works Loan (Rs. 18,38,921)	.....	17,759 3 7		
Do. do. 7 lakhs Sanitary Works Loan (Rs. 1,90,389)	.....	2,241 2 5		
Do. do. 12 Lakhs Drainage and Water Works Loan (Rs. 85,000) ...	.....	896 4 0		
Do. do. Rs. 10,08,500 Miscellaneous Works Loan (Rs. 1,35,000)...	.....	1,562 2 0		
Tansa Water Works Loan of Rs. 147 Lakhs	.....	64,488 10 6		
Water Works portion of the 35 Lakhs Various Sanitary Works Loan (Rs. 9,20,000).	.....	11,406 15 2		
Do. do. 42 Lakhs Loans for repayment of Government Consolidated Loan (Rs. 28,59,762).	.....	55,843 11 0		
Do. do. 23½ Lakhs Loan for Drainage and other Works (Rs. 2,45,500)	.....	2,905 14 0		
Do. do. 15¾ Lakhs Loan for Sewerage, Wari Bunder, &c., Works (Rs 30,000)	.....	332 10 8		
Do. do. 25 Lakhs Loan for Sewerage, &c., Works (Rs. 2,31,297).	.....	2,708 7 9		
Do. do. 24¾ Lakhs Loan (Rs. 2,73,000).	.....	3,150 3 6		
Do. do. 12¾ Lakhs Loan	.....	25,117 13 0	(a)2,52,131 15 7	
				19,61,376 1 4
Balance—Income in excess of Expenditure ...				2,18,415 5 7
			Total Rs. ...	21,79,791 6 11

(a) *Vide* page 119.

J. CRERAR,
Municipal Commissioner.

Appendix

WATER WORKS

SCHEDULE OF LIABILITIES AND

LIABILITIES.	Rs a. p.	Rs. a. p.	Rs. a. p.
Debt due to Government—			
Government of Bombay on account of Vehar Debt (see page 76)		22,66,416 3 9	
Debt due to the Public—			
Portion of 10 lakhs for the Bhandarwada Water Works of the Loan of Rs. 26,94,000 of 1878	2,95,343 6 7		
Water Works portion of the 44 lakhs Sanitary Works Loan	16,13,651 4 7		
Water Works portion of the 7 lakhs Sanitary Works Loan	1,90,389 0 0		
Water Works portion of the 12 lakhs Drainage and Water Works Loan	85,000 0 0		
Water Works portion of the Miscellaneous Works Loan of Rs. 10,08,500	1,35,000 0 0		
Water Works portion of the 35 lakhs Various Sanitary Works Loan	9,20,000 0 0		
Tansa Water Works Loan of 147 lakhs	1,47,00,000 0 0		
Water Works portion of the 42 lakhs Loan for repayment of the balance of Government Consolidated Loan ..	28,59,762 0 0		
Water Works portion of the 23½ lakhs Loan for Drainage and other Works	2,45,500 0 0		
Water Works portion of the 15⅝ lakhs Loan for Sewerage, Wari Bunder, &c., Roads, Burial Ground and certain Water Works	30,000 0 0		
Water Works portion of the 25 lakhs Loan for Sewerage, Roads and other Works	2,31,297 0 0		
Water Works portion of the 24¾ lakhs loan for certain Sewerage and Water Works	2,78,000 0 0		
12½ Lakhs Loan for certain Water Works	12,75,000 0 0		
Water Works portion of the Interest and Instalments on account of Sinking, &c., Funds—		2,28,54,442 11 2	
Sinking Funds	47,91,351 0 0		
Special Funds	5,60,118 9 3		
		53,51,469 9 3	3,04,72,328 8 2
Balance—Assets in Excess of Liabilities ...			51,50,486 13 3
		TOTAL Rs. ...	3,56,22,815 5 5

R. PEEL,
Acting Chief Accountant.

No. 12.
ACCOUNT.
ASSETS AT 31ST MARCH 1913.

ASSETS.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Properties—			
Water Works executed out of Loan and Reserve Funds as detailed at pages 98 to 101 (*vide* Appendix No. 10-A) ...			(a) 3,02,17,013 14 4
II. Investments—			
1. Bank of Bombay, Municipal Loans Sinking Fund Deposit Accounts—			
Rs. a. p.			
5 per cent. Loans 29,49,417 0 0			
4 „ „ 18,34,437 0 0			
3½ „ „ 7,497 0 0			
	(b) 47,91,351 0 0		
2. Bank of Bombay Worn-out Water Mains Renewal Fund Deposit Account (*vide* page 89)	5,36,515 3 1		
3. Bank of Bombay Net Premia on different Municipal Loans Deposit Account (*vide* page 89)	23,603 6 2		
		53,51,469 9 3	
4. Loan Funds Investments Deposits (*vide* page 87) ...	2,50,016 7 7		
Less—Value of properties (Water Works) executed out of Loan Funds Advances (*vide* page 100)	1,95,684 8 9		
		54,331 14 10	
			54,05,801 8 1
		TOTAL RS. ...	3,56,22,815 5 5

(a) Exclusive of charges met out of the contribution from the G. I. P. Railway Company for removing and relaying 32" Vehar Main at Cooria. When this work is completed and the difference between the value of the old and new work is ascertained necessary adjustment for treating the item as "Assets" will be made.

(b) *Vide* page 87.

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS

ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
RECEIPTS.				
MUNICIPAL FUND.				
Cash Balance (in Bank and Office Treasuries) on 1st April 1913				3,70,273 4 0
GENERAL TAX—				
From the Public		44,71,715 1 1		
„ Government of Bombay		2,32,835 0 0		
„ Port Trust		2,47,312 0 0		
			49,51,862 1 1	
WHEEL TAX AND TOLLS—				
WHEEL TAX—				
Through Assessor and Collector (Private Conveyances)	2,35,454 10 8			
Through the Chief Accountant (Public Land Conveyances)	2,66,384 0 0			
		5,01,838 10 8		
TOLLS—(Through Contractors)		21,683 5 4		
			5,23,522 0 0	
TOWN DUTIES (Gross Collections)		38,28,507 4 4		
Less—Refunds		20,86,376 5 0		
			17,42,130 15 4	
LICENSES—				
(*a*) Taxes on Trades and Professions		1,13,238 0 0		
(*b*) Land Conveyance, Music, &c., Licenses (issued by the Commissioner of Police)—				
(*1*) Music Licenses		8,485 2 7		
			1,21,773 2 7	
LIQUOR LICENSES—Receipts from Government			1,43,750 0 0	
TOBACCO DUTY LICENSES—Receipts from Government (through Commissioner of Customs)			2,83,525 12 0	
HALALKHORE TAX—				
On value		11,45,076 11 6		
For special services		2,07,755 12 9		
			13,50,832 8 3	
WATER TAX AND OTHER MISCELLANEOUS WATER WORKS REVENUE—				
Water Tax through Assessor and Collector—				
On value	10,44,041 4 1			
On meter measurement	10,45,568 8 10			
Compounded Tax	11,878 14 6			
	21,01,478 11 5			
Water charges recovered through Water Engineer	18,908 7 2			
	21,20,387 2 7			
Rent of Water Meters	32,196 4 0			
Miscellaneous	15,432 0 4			
		21,68,015 6 11		
Sale-proceeds of and produce of lands		2,695 15 0		
Rent of land and buildings		237 0 0		
			21,70,948 5 11	
MARKET RECEIPTS—				
Stall rents	1,92,640 1 8			
Squatters' fees	50,782 7 0			
Fair Ground and Feeding Fees from Contractors	79,709 0 0			
Miscellaneous	29,265 15 6			
		3,52,389 6 2		
Slaughter fees		2,24,732 7 0		
Rent of land and buildings		3,138 0 0		
Sale-proceeds and produce of land		10 0 0		
			5,80,269 13 2	
Carried over Rs.			1,18,68,614 10 4	3,70,273 4 0

No. 13.

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913.

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
DISBURSEMENTS.				
MUNICIPAL FUND.				
GENERAL SUPERINTENDENCE—				
Standing Committee and Corporation Establishment ...		76,496 15 3		
Municipal Commissioner's Personal Office Establishment		63,249 1 9		
General Office Establishment		86,198 11 4		
Accounts and Expenditure Audit Establishment ...		88,580 0 8		
			* 3,14,524 13 0	
ASSESSMENT AND COLLECTION DEPARTMENT—				
Property and Wheel Tax Establishment	† 2,16,503 3 11			
Town Duty Collection	1,19,462 13 11			
Licensing Establishment	21,705 15 7			
Revenue and Refund Audit Establishment	‡ 32,296 12 8			
		4,89,968 14 1		
TOLLS COLLECTION—				
Establishment and other charges		536 13 8		
			4,10,505 11 9	
FIRE BRIGADE		2,88,900 10 3		
Add—Transferred from Interest on Loans, (page 119)—				
(1) Interest on the Fire Brigade portion of the 55 lakhs loan	5,880 0 0			
(2) Interest on the Fire Brigade Loan of 4½ lakhs...	17,040 0 0			
		22,920 0 0		
MAINTENANCE OF PUBLIC GARDENS—			(a) 3,11,820 10 3	
(a) VICTORIA GARDENS—				
Maintenance		64,488 12 10		
(b) ELPHINSTONE CIRCLE GARDEN...		1,649 7 11		
(c) FALKLAND ROAD GARDEN		386 11 2		
(d) NORTHBROOK GARDEN		1,460 10 11		
(e) SIR COWASJEE JEHANGIR GARDEN		435 9 11		
(f) BAZAR GATE GARDEN		244 12 1		
(g) DICK'S TANK GARDEN		247 7 10		
(h) MALABAR HILL GARDEN		688 0 0		
(i) ESPLANADE GARDEN		4,897 2 6		
(j) CHOWPATI BAND STAND		1,460 0 0		
(k) FLORA AND WELLINGTON FOUNTAINS AND THE QUEEN'S STATUE		53 7 6		
			76,012 2 3	
PUBLIC WORKS (ENGINEER'S) DEPARTMENT—				
I. GENERAL SUPERVISION AND MISCELLANEOUS DUTIES		§ 80,484 2 10		
II. MECHANICAL BRANCH—				
For *A*—Workshops—see page 121				
„ *B*—Maintenance of Compressor Station, Colaba (Shone System)	34,156 11 4			
„ *C*—Maintenance of Love Grove Pumping Station ..	1,43,354 14 10			
„ *D*—Maintenance of Air Compressor Station at Love Grove (Shone System)	75,622 14 4			
„ *E*—Maintenance of Storm Water Sluices	1,675 3 0			
		2,54,809 11 6		
III. SANITARY—Disposal of Town Sweepings		1,02,135 7 3		
IV.—DRAINAGE—				
A. Miscellaneous Drainage	2,49,842 9 11			
B. Maintenance of Sluices	2,803 9 0			
		2,52,646 2 11		
Public Works (Engr.'s Dept.) contd. and carried over Rs.		6,90,075 8 6		
Carried over Rs. ...			11,42,863 5 8	

* Of this, Rs. 39,313 are charged to Water Works Account.

† Do. Rs. 64,950-14-5 do. do. do.

‡ Includes Rs. 61,805-4-6 on account of Town Duty Refund Establishment.

(*a*) Or Rs. 3,20,025-15-9 includes the Sinking Fund Instalment of Rs. 8,205-5-6 included in the Sinking Fund payments aggregating Rs. 11,03,745-0-6 shown at page 121

§ Of this, Rs. 13,414 are chargeable to Water Works Account.

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS

ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward, Rs.			1,18,68,614 10 4	3,76,273 4 0
PUBLIC GARDENS—				
VICTORIA GARDENS—				
Sale-proceeds of Plants, Flowers, &c.		5,496 15 10		
Rent of Chawls from Malees, &c.		391 10 8		
Fees for Elephant ride		1,203 13 0		
Rebate towards the cost of the Maintenance of the Museum Garden		600 0 0		
Fees for Camel ride...		63 12 0		
Fees for admittance...		2,329 8 0		
Right of selling refreshments		1,697 14 8		
			12,283 10 2	
TRAMWAY RENT			54,519 1 6	
MISCELLANEOUS FINES AND PENALTIES			31,120 14 11	
MISCELLANEOUS RECEIPTS—				
General Sales Account—				
Sale of Land	1,17,534 13 1			
Miscellaneous	18,241 7 4			
		1,35,776 4 5		
On account of Health Department—				
Rent of Chawls, Milch Cattle Stables and Dhobiwada.	63,803 11 0			
Sale-proceeds of land and produce of land	17,960 4 0			
Sale of Bones, Manure and Cowdung Cakes, &c. ...	2,743 4 0			
Cleaning Drains	4,052 9 7			
Miscellaneous	12,800 10 11			
		1,01,350 7 6		
On account of Engineer's Department—				
Cleveland Bunder Fees ... ... Rs. 1,924 12 6				
Ground rent for Telephone Lines. ,, 8,179 2 0				
Other Ground rent... ... ... ,, 21,001 1 3				
	31,104 15 9			
Right of catching fish, cutting grass, collecting fruits, drawing toddy, &c.	17,246 0 0			
Miscellaneous	9,798 11 4			
		58,149 11 1		
On account of Drainage Department—				
Ground rent and Rent of Buildings	306 9 0			
Miscellaneous	3,600 6 3			
		3,906 15 3		
Miscellaneous—				
Sundries		9,464 6 5		
			3,03,647 12 8	
MISCELLANEOUS FEES—				
Through Assessor and Collector—				
Buttakee, Notice, &c., Fees		5,307 0 0		
Through Executive Engineer—				
Projecting Verandahs, Balconies, &c.	15,573 4 2			
Opening Roads	2,675 12 0			
Scaffoldings	7,681 14 3			
Occupying Public Roads	2,850 0 0			
Sundries	282 0 0			
		29,062 14 5		
Through Health Officer—				
Digging Graves	5,522 2 0			
Removing Dead Animals	6,427 8 0			
Skinning Dead Animals	41,275 0 0			
Supplying copies of Office Records, &c....	1,629 0 0			
Municipal Laboratory Fees	1,301 0 0			
Fees for Vaccine Instructions	345 0 0			
Fees for vaccinating persons at private places... ...	1,454 8 0			
Fees for admission to the Sanitary Department ...	Dr. 165 0 0			
Fees for Clinical Instructions	795 0 0			
		58,534 2 0		
Miscellaneous—				
Supplying copies of Office Records, &c., of different Municipal Departments		292 6 3		
			93,196 6 8	
Carried over Rs. ...			1,28,68,382 3 3	3,76,273 4 0

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and brought forward ... Rs.			11,42,863 5 8	
PUBLIC WORKS (Engineer's Department)—*contd.* and brought forward... ... ... Rs.		6,90,075 8 6		
V.—WATER WORKS...		*3,38,406 13 0		
VI.—STREETS AND BUILDINGS—				
A. Inspection and Supervision	1,81,068 11 8			
B. Public Lighting	3,92,563 15 11			
C. Road Watering	80,915 1 9			
C. I. Oiling and Tarring Roads (experimental) ...	44,820 6 8			
D. Roads, footpaths, &c.	4,58,746 3 4			
E. Improvement of Streets	1,15,759 9 2			
F. Miscellaneous—				
Compensation to Municipal staff employed on extricating bodies of persons overwhelmed in the debries of fallen buildings, &c	2,957 8 7			
		13,06,831 9 1		
VII.—Cleaning, Lighting and Repairing Port Trust Wharves Roads		40,183 0 0		
			23,70,496 14 7	
NEW WORKS—				
GENERAL SUPERINTENDENCE—				
Corporation and Standing Committee's Establishment—				
Providing a closet in the Councillor's room	31 0 10			
General Office Establishment—				
Rs. a. p.				
Making permanent decorations in the Corporation Hall in the Municipal Building... ... ... 819 3 6				
Renewing the terrace roof over the retiring room of the Assessor and Collector and removing and replacing tanks thereat over rolled steel joists. 216 0 7				
Renewing the terrace roof over the retiring room of the Water Engineer in the Municipal Office Building and removing and replacing tanks thereat over rolled steel joists... ... ... 220 0 0				
Renewal of the terrace over the porch on the west side of the Municipal Office Building 1,420 0 0				
Erecting a shed for the Municipal Motor Cars at Paltan Road 3,776 9 7				
Renewal of the terrace over the rooms occupied by the Deputy Executive Engineer, Drainage, and his Assistants in the Municipal Office Building 1,128 11 3				
	7,380 8 11			
		7,611 9 9		
Fire Brigade—				
Constructing a 4-seated water-closet at Chinchpokli Fire Brigade Station	2,067 15 7			
Construction of Petrol Depôts at Byculla, Babulla Tank and Colaba Fire Brigade Stations and alterations of the stables at Colaba Fire Brigade Station	424 8 4			
Constructing a staircase to Foreman's quarters at Chinchpokli Fire Brigade Station	326 3 9			
Constructing a staircase to men's chawl and double ventilating tiles to all laskars' quarters at Sankli Tank Fire Brigade Station	599 9 10			
Constructing water-closets to Foreman's quarters at different Fire Brigade Stations	2,147 12 11			
Construction of 6 watch rooms for alarms, Telephone, &c., at different Fire Brigade Stations	1,203 1 9			
Constructing a tiled shed at the Haines Road Fire Brigade Station and painting the same	508 15 9			
		7,278 3 11		
Public Gardens—				
Construction of a store godown with rooms for Carpenters, Smiths, Malees, Tools	1,420 6 5			
Providing three new latrines in the Victoria Gardens	2,200 0 6			
Constructing a storm-water drain in the Victoria Gardens	3,280 3 7			
Construction of Overseer's quarters in the Victoria Gardens	1,068 15 3			
		7,969 9 9		
General Supervision and Miscellaneous Duties—				
Enclosing the East and West corridors of the Executive Engineer's Office		853 14 7		
New Works—*Continued* and carried over ... Rs. ...		23,713 6 0		
Carried over Rs. ...			35,13,360 4 8	

* Chargeable to Water Works Account.

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS

ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward. Rs.			1,23,68,382 8 3	3,70,273 4 0
MISCELLANEOUS SAVINGS			8,547 1 4	
CONTRIBUTION from Municipal Servants towards Pension, &c., Fund			40,856 9 5	
INTEREST on Investments of Surplus Loan and other Balances—				
Profit on the sale of 3½ per cent. Government Paper ...		1,378 9 1		
Loan Fund Investments		†77,125 8 7		
Surplus Fund Investments		1,93,330 3 1		
			2,71,834 4 9	
PROFIT on Municipal Workshops			2,735 14 9	
SALE-PROCEEDS of Unserviceable Tools, Plant, &c. ...			7 484 13 6	
ACTUAL Profit on Sale of Stores to Contractors			4,366 14 4	
INTEREST at 3 per cent. on Corporation lands made over to C. I. Trust			37,431 3 10	
				1,27,41,589 6 2
Carried over ...Rs.				1,31,11,862 10 2

† Includes Rs. 8,843-1-0 received on the Water Works portion of Loan Fund Investments.

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs a p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward. Rs.			35,13,360 4 3	
NEW WORKS—*continued* and brought forward ...Rs.		23,713 6 0		
Drainage—				
Miscellaneous Drainage Works	8,599 13 1			
Providing a covered drain for draining the subsoil water in Nepean Sea Road opposite H. H. the Nizam's bungalow	4,250 2 6			
Covering the existing open side drain and providing five full-sized and six half-sized water entrances at the North of Wari Bunder Road	2,460 13 0			
Laying 12" double pipe drain from the junction of Dadar Road and Naigam Cross Road	264 11 3			
Providing 12" stoneware pipe drain with half-sized water entrances for storm-water near the junction of Sewri Old Road, Sewri Cross Road and Sewri Koliwada	1,840 7 7			
Construction of permanent man-holes over the storm-water drains	1,993 5 8			
Constructing a storm-water masonry drain in Apollo Street	1,789 7 7			
Providing a covered storm-water drain with water entrances in Colaba Road between Victoria Bunder Road and Kittridge Road	2,413 0 5			
Providing two 12" C. I. drain pipes by the sides of the existing drains at Dadar Road near the present Tramway Terminus	561 13 4			
Filling in road side drain at Tardeo Road and constructing water entrances with water tables... ...	10 8 0			
Providing two 12" C. I. drain pipes under the existing culvert at Vincent Road	582 1 5			
Providing water tables and 4 water entrances at Mustan Tank Cross Lane	730 15 6			
Providing one 15" C. I. pipe drain by the side of the existing drain in Dadar Road opposite Gold Mohur Mills	334 9 8			
Strengthening a relieving arch at Falkland Road ...	3,883 12 7			
Providing storm-water drain with half sized water entrances at Lalwadi near Parel Chawl Road ...	953 6 8			
Providing two 12" C. I. drain pipes by the side of the existing drain on Dadar Road near its junction with Vincent Road	514 2 6			
Constructing a storm-water drain with water entrances in 1st Umarkhadi Road	1,297 11 10			
Providing water tables and water entrances in Gowalia Tank Road	1,498 0 8			
Laying 12" pipe sewer in Girgaum Road between Charni Road and Kandewady Road	2,006 5 11			
Providing fair weather C. I. concrete covers and frames for water entrances and removing obsolete perforated stones and constructing new type water gully in the whole of A Ward	7,259 15 3			
Shifting water entrances at New Purbhadevi Road ...	101 7 3			
		43,296 11 8		
Water Works—				
Providing additional masonry cattle troughs in various parts of the City	1,755 12 7			
Laying 4" main in Arab Lane	2,230 11 11			
Laying 9" and 5" mains in Hansraj Lane	2,058 8 8			
Laying a 5" main in Zacba's Cart	2,071 15 8			
Constructing a screening chamber at Bhandarwada Reservoir	468 5 6			
Replacing 3" main in Kika Street by a 5" main ...	409 3 6			
Removing weeds in Vehar and Tulsi lakes by a motor weed cutter boat	6,369 13 6			
Providing a wire fence at Vehar	7,102 0 0			
Replacing 3" main in Bapu Khote Street by a 5" main	10 15 6			
Completing water proofing works at Malabar Hill Reservoir	16,361 15 6			
Laying a 12" main from the Tulsi Pipe line roads to World Road in place of the 6" main in Fergusson Road	757 9 1			
Rendering reservoirs and filters at Malabar Hill water tight	12,957 3 8			
Laying a 5" main in Temker Street	708 2 5			
Housing the sluicemen of the Water Works Branch, D Ward	2,667 0 11			
Laying a distributing 9" main in Kolbhat Lane ...	218 10 7			
Laying a 6" water main in Reay Road	836 15 11			
Laying a 5" main in Undria Street	445 12 9			
Removal of jungle along Tansa Duct	2,081 12 5			
Laying a 5" main in Tank Street...	2,179 12 2			
Extending 9" main in Agiary Street	118 10 2			
Laying a 4" main in Shaik Burhan Street ...	628 1 9			
		*62,599 0 2		
NEW WORKS—*contd.* and carried over ... ... Rs.		1,29,409 1 10		
NEW WORKS—*contd.* and carried over Rs...			35,13,360 4 3	

* Chargeable to Water Works Account.

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS

ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward Rs.				1,31,11,862 10 2
Carried over ...Rs.				1,31.11.862 10 2

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward Rs.			35,13,360 4 3	
NEW WORKS—*continued* and brought forward — Rs.		1,29,409 1 10		
STREETS AND BUILDINGS—				
Constructing a building at Gowalia Tank Road for Offices of Building and Lighting Inspectors of D Ward	1,617 7 11			
Removing the fence at Hornby Vellard...	3,833 6 6			
Removing the cab stand near the Church Gate station from the roadway to the vacant ground belonging to Government and restoring the roadway and reconstructing the cab stand	590 0 0			
Improvements at Mayo Road	4,649 12 11			
Putting up water tanks in F and G Wards and Napier Road and Fort Street	408 8 9			
Constructing 20 rooms of a semi-permanent nature at Babula Tank for the accommodation of Road beggaries, B & C Wards	3,256 0 4			
Providing a boundary railing at Sankli Tank Ward Office	245 13 1			
	14,601 1 6			
Less—				
Improvement of Roads, &c., at Bhatia Baug	*Cr.* 199 14 9			
		14,401 2 9		
SANITARY AND OTHER *MISCELLANEOUS* WORKS—				
Constructing a latrine and a pail depôt at Ghorupdeo Road...	1,831 15 11			
Constructing an approach road at Mahim Burial Ground	1,322 12 3			
Paving and enclosing dust-bin carts stands	79 6 4			
Building a wall for protecting the Mahim Burning and Burial Grounds from the inroads of the sea ...	1,030 2 8			
Extension of Municipal Laboratory in the Municipal Office Building	199 10 5			
Making a pucca road at Haines Road Cemetery from the entrance to the Burning Ground	809 11 8			
Acquisition of land at Matarpakhadi for a stand for dust-bin carts of the Health Department	1,616 0 0			
Renewing the roof valley gutter of the Halalkhores' chawls at Suklajee Street	1,591 2 1			
Construction of public latrines and urinals	5,018 15 0			
Construction of five catchra waggons for the disposal of Town sweepings	12,667 14 0			
Making certain additions and alterations to the pail depôt at Banganga Tank, Malabar Hill	1 8 9			
Constructing the permanent night-soil depôt at Belvedere Hill, &c.	668 7 3			
Constructing dust-bin stands, sweepers' quarters and drainage and water connections at Khara Tank and Agiary Street...	4,732 2 0			
Constructing the existing one-seated privy into two water-closets on full flushing system at Foras Road Dharamshalla	909 4 3			
Construction of a hopper to the South of the Pilot Bunder Peer, Colaba, on Military lands	284 1 0			
Full metalling, &c., of the strip of land about 1,000 ft. in length at Tardeo Flats	1,199 4 0			
Constructing temporary huts for housing the beggaries and cart drivers, B Ward, North	1,470 1 11			
Constructing quarters for grave diggers at the Roman Catholic Cemetery at Haines Road	1,660 6 9			
	37,092 14 3			
Less—				
Acquisition of three plots of land required for the location of dust-bin carts	*Cr.* 0 8 0			
		37,092 6 3		
NEW WORKS—*contd.* and carried over Rs.		1,80,902 10 10		
Carried over Rs. ...			35,13,360 4 3	

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS
ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward ...				1,31,11,862 10 2
Carried over Rs...				1,31,11,862 10 2

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and Brought forward Rs. ...			35,13,360 4 3	
NEW WORKS—*contd.* and Brought forward Rs. ...		1,80,902 10 10		
MARKETS—				
Remodelling the drainage arrangements of the Crawford Market Main Building	8,399 12 4			
Paving the open yard at the back of the Fergusson Road Market	913 15 0			
Repairing the terrace roof of the Bhuleshwar Market.	4,177 5 0			
Providing three water closets, one on the 1st floor for the use of the market staff and two on the 2nd floor for the Superintendent's use	2,071 4 7			
Making and fixing of two iron drinking troughs at Bandora with blue stone pavement	319 6 3			
		15,881 11 2		
PUBLIC HEALTH DEPARTMENT—			1,96,784 6 0	
I. General Supervision		1,36,691 1 4		
II. Conservancy Branch—				
Veterinary Establishment...	9,783 15 11			
Other Conservancy Charges	16,87,108 1 5			
		16,96,892 1 4		
III. Markets and Slaughter Houses		1,89,506 5 6		
IV. Registration of Births and Deaths		81,199 5 8		
V. Cemeteries		12,158 8 5		
VI. Laboratory		15,835 6 10		
VII. Mahaluxmi Dhobiwada		15,707 3 1		
VIII. Infectious Diseases		65,893 0 10		
IX. Milch-Cattle Stables and Rooms		6,176 6 7		
X. Dispensaries		13,734 7 2		
XI. Rustomji Jamshetji Dharamshalla, Falkland Road.		779 9 4		
XII. Vaccination		26,732 5 3		
XIII. Malaria		50,983 13 1		
			23,11,335 10 5	
GENERAL STORES—				
Establishment and Contingencies			34,069 7 8	
EDUCATION—				
Prince of Wales Museum	25,000 0 0			
Victoria and Albert Museum	15,269 0 3			
		40,269 0 3		
Other Institutions		3,78,242 5 0		
			4,18,511 5 3	
CENSUS			4,145 8 0	
HOSPITALS, &c.			4,46,160 0 0	
CONTRIBUTION to the City Improvement Trust ...			2,25,000 0 0	
PENSIONS, &c.			96,913 7 7	
Carried over Rs. ...			79,46,388 12 2	

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS
ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and Brought forward ...				1,31,11,862 10 2
Carried over Rs. ...				1,31,11,862 10 2

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and Brought forward Rs....			79,46,329 12 2	
MISCELLANEOUS—				
Discretional Contingencies		4,014 4 9		
Auditors' Allowance		10,000 0 0		
House Rent		*Cr.* 4 10 4		
Loss on account of private works—Irrecoverable bills written off		267 6 0		
Local Allowance		55,692 12 4		
Cost of caskets and addresses presented to Lord Sydenham, the retiring Governor, and to Lord Willingdon, the Governor designate, and other expenses in connection therewith		750 11 0		
Contribution for the 1st year towards the expenses of King George V Anti-Tuberculosis League		10,000 0 0		
Charges in connection with the illumination of the Municipal Office Buildings, &c., during Royal Visit ..		29,714 10 1		
Loss written-off on account of deficiency in the stock at the Bellasis Bridge Pipe Depôt		1,538 2 6		
Refund of a portion of the amount recovered for the right of collecting fees at the scale shed at A. C. Market during 1911-12		1,000 0 0		
Compensation to a Victoria Driver in respect of his claim for damage caused to his carriage		125 0 0		
Adjustment (part) of the advance of Rs. 9,10,052-7-4, outstanding under Plague expenditure suspense adjustment account		3,10,052 7 4		
Grain compensation		1,12,733 9 6		
			5,85,934 5 2	
INTEREST ON LOANS		26,18,687 6 5		
Less—				
Shown under Fire Brigade (page 109)		22,920 0 0	* 25,95,767 6 5	
CHARGES ON ACCOUNT OF LOANS			† 12,021 10 11	
PLAGUE CHARGES			1,47,763 6 2	
Debt—				
INSTALMENTS ON ACCOUNT OF SINKING FUND—				
5 per cent. Municipal Loans		1,93,382 4 5		
4 " " " 3½ per cent. basis ...		2,99,665 7 10		
4 " " " 3 " " ...		1,20,846 1 1		
3½ per cent. Municipal Loans ... "		11,089 0 6	‡ 6,24,982 13 10	
INSTALMENT ON ACCOUNT OF MUNICIPAL BUILDINGS FIRE INSURANCE FUND			10,000 0 0	1,18,72,809 0 8
PAID OUT OF THE NET PREMIA FUND—				
Premia on investments of 5 per cent. Loans Sinking Fund		*Cr.* 16,087 8 0		
Premia on the investments of 4 per cent. Loans Sinking Fund		*Cr.* 23,527 8 0		
Premia on the investments of 3½ per cent. Loans Sinking Fund		*Cr.* 623 12 0	*Cr.* 40,238 12 0	
Sale-proceeds of water-marked paper supplied to the Bank of Bombay			*Cr.* 235 4 8	*Cr.* 40,474 0 8
Loan Works (*vide* Appendix No. 9)				17,87,920 10 4
Carried over Rs....				1,86,20,255 10 4

* Includes Rs. 11,90,941-3-4 chargeable to Water Works Account.

† Of this Rs. 4,819-2-10 are chargeable to Water Works Account.

‡ Of this Rs. 2,52,131-15-7 are chargeable to Water Works Account.

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS
ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward. Rs.				1,31,11,862 10 2
ADVANCES—				
(*a*)—CASH ADVANCES TO MUNICIPAL OFFICERS... ...			1,29,130 14 9	
(*b*)—INTER-DEPARTMENTAL CHARGES—				
Workshops (Private and Departmental Works) ..		1,94,623 6 2		
Private Works (Engineer's, &c., Departments)... ...		62,771 11 2		
Departmental Works (do.)		2,42,661 5 8		
			4,99,956 7 0	
(*c*)—ADVANCES TO CONTRACTORS			17,033 7 1	
(*d*)—MISCELLANEOUS			38,052 7 8	
(*e*)—RESERVE STOCK—				
Stock	5,90,788 4 6			
Water Works Imprest	2,857 13 2			
Executive Engineer (General)	17,880 7 0			
		6,11,526 8 8		
Surplus and Obsolete Stores		8,694 6 7		
Stock Adjustment Account		7,005 0 2		
Line Suspense Account		1,542 4 0		
			6,28,768 3 5	
Purchases			5,56,986 9 10	
Sales			52,123 11 10	
				19,21,451 13 7
Carried over ... Rs.				1,50,33,314 7 9

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*continued* and brought forward Rs.				1,86,20,255 10 4
PAID OUT OF THE WORN-OUT WATER MAINS RENEWAL FUND—				
Laying water mains in A Ward			2,193 14 5	
Laying 5" Main in Tank Street			681 5 0	
Laying water mains in B Ward			17,186 0 3	
Laying 12" main from Tulsi pipe Line Road to Worli Road in place of the 6" main in Fergusson Road ...			3,222 13 7	
Laying a 4" Main in Shaik Burhan Street			329 1 11	
Replacing a 4" Main by a 6" Main in Love Lane ...			2,318 9 8	
				25,931 12 10
DEBT—				
REPAYMENT—				
Vehar Debt			22,880 9 0	
Drainage Loan of 1878			96,000 0 0	
				1,18,880 9 0
Investment of Sinking Fund and of Interest accrued thereon—				
Sinking Fund Instalments			6,24,982 13 10	
Interest Realizations			4,78,762 2 8	
				11,03,745 0 6
Income and Expenditure Account—				
(*Transfer* of Balances hitherto standing to the Credit of Sinking and other Special Funds)				1,26,77,018 3 1
PLAGUE EXPENDITURE SUSPENSE ADJUSTMENT ACCOUNT—				Cr. 3,10,052 7 4
ADVANCES—				
(*a*)—CASH ADVANCES TO MUNICIPAL OFFICERS... ...			1,18,283 9 3	
(*b*)—INTER-DEPARTMENTAL CHARGES—				
Workshops (Private and Departmental Works) ...		1,99,033 10 2		
Private Works (Engineer's and Health Departments)...		79,318 7 8		
Departmental Works (Engineer's Department) ...		2,45,305 11 11		
			5,23,657 13 9	
(*c*)—ADVANCES TO CONTRACTORS			42,944 14 1	
(*d*)—MISCELLANEOUS			10,11,498 0 10	
(*e*)—RESERVE STOCK—				
Stock	5,84,960 11 8			
Water Works Imprest	4,955 4 9			
Executive Engineer (General)	21,025 0 0			
		6,10,041 0 5		
Stock Adjustment Account		1,312 0 2		
Line Suspense Account		2,287 4 4		
Surplus and Obsolete Stores...		139 14 9		
			6,13,780 3 8	
Purchases			5,16,117 5 2	
Sales			52,723 1 10	
				23,74,010 1 0
Carried over Rs. ...				2,98,03,736 14 2

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS
ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and brought forward ...				1,50,33,314 7 9
DEPOSITS—				
(*a*)—BANK OF BOMBAY ON ACCOUNT OF CONTRACTORS, &c., PAPER DEPOSIT			82,000 0 0	
(*b*)—SURPLUS FUND INVESTMENTS—				
Paper Deposit		3,20,532 3 0		
Cash Deposit		27,172 3 8		
Current Account Deposit		15,36,278 1 1		
Fixed Deposit		64,00,000 0 0	82,83,982 7 9	
(*c*)—LOAN FUNDS—				
Paper Deposit		12,25,945 0 0		
Cash Deposit		53,895 3 0		
Current Account Deposit		1,82,100 0 0		
Fixed Deposit		14,50,000 0 0	29,11,940 3 0	
(*d*)—RESERVE FUNDS—				
1—Municipal Buildings Fire Insurance Fund—				
Cash Deposit		6,042 9 8		
2—Worn-out Water Mains Renewal Fund—				
Paper Deposit	25,500 0 0			
Cash Deposit	22,868 4 2	48,368 4 2		
3—Net Premia, &c., Fund—				
Cash Deposit		60,680 10 0	1,15,091 7 10	
Bank of Bombay on account of Contractors' Securities held under objection			14,800 0 0	
Deposits—carried over ...			1,14,07,814 2 7	
Carried over Rs. ...				1,50,33,314 7 9

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*contd.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and brought forward Rs.				2,98,03,738 14 2
DEPOSITS—				
(a)—BANK OF BOMBAY ON ACCOUNT OF CONTRACTORS, &c., PAPER DEPOSIT			1,43,900 0 0	
(b)—SURPLUS FUND INVESTMENTS—				
Paper Deposit		23,500 0 0		
Cash Deposit		27,172 3 8		
Current Account Deposit		19,29,177 4 4		
Fixed Deposit		62,50,000 0 0		
			82,31,849 8 0	
(c)—LOAN FUNDS—				
Paper Deposit		.....		
Cash Deposit		53,895 3 0		
Current Account Deposit		1,80,176 13 0		
Fixed Deposit		12,00,000 0 0		
			14,34,072 0 0	
(d)—RESERVE FUNDS—				
1—Municipal Buildings Fire Insurance Fund—				
Paper Deposit	16,025 15 0			
Cash Deposit	6,272 1 4			
		22,298 0 4		
2—Worn-out Water Mains Renewal Fund—				
Paper Deposit	22,593 2 0			
Cash Deposit	23,082 12 0			
		45,675 14 0		
3—Net premia, &c., Fund—				
Paper Deposit	60,570 10 0			
Cash Deposit	61,052 5 4			
		1,21,622 15 4		
			1,89,596 13 8	
Bank of Bombay on account of Contractors' Securities held under objection			14,700 0 0	
Bank of Bombay on account of Public monuments, &c.—				
Maintenance of a charitable dispensary at Kamatipura opened by Rao Bahadur Ellapa Ballaram ..		19,500 0 0		
Maintenance of J. N. Tata's Memorial		1,200 0 0		
			20,700 0 0	
Deposits—carried over ...			1,90,34,818 5 8	
Carried over ...				2,98,03,738 14 2

STATEMENT OF TOTAL RECEIPTS AND DISBURSEMENTS
ending 31st

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND.—*contd.* and brought forward ..				1,50,88,314 7 9
DEPOSITS—*contd.* and brought forward			1,14,07,814 2 7	
Deposits from Contractors, &c.—				
In Cash— Rs. a. p.				
(*a*) From Contractors ... 4,02,324 13 7				
(*b*) „ Private parties received through Departmental Officers. 71,738 2 3				
(*c*) Other Deposits 2,28,180 0 0				
	7,02,742 15 10			
In Government Paper kept in Office	1,55,100 0 0			
In Government Paper lodged at the Bank of Bombay	1,48,900 0 0			
On account of work performed for private parties ...	83,172 6 5			
		10,84,915 6 8		
Government of Bombay on account of Income Tax...		25,295 12 3		
Profit on Sale of Stores	4,015 9 1			
Miscellaneous Receipts, Stores Department—Supervision Charges on Stores sold	431 10 0			
		4,447 3 1		
Court Attachments		2,061 4 9		
Interest realized on Government, &c., paper lodged by the Municipal Employés, Contractors, &c. ...		5,138 12 10		
(Government of Bombay) Land Conveyance, Licenses, &c.—				
Through Chief Accountant on account of License Fees, Badges, &c.		26,064 8 0		
Securities of Municipal Employés and Contractors returned by the Bank of Bombay for payment (kept in office)	82,000 0 0			
Paper Deposits from Municipal Employés and Contractors pending submission to the Bank of Bombay (kept in office)	1,47,200 0 0			
Contractors' securities held under objection	2,000 0 0			
Deposit for the maintenance of a Charitable Dispensary at Kamatipura opened by Rao Bahadur Ellapa Balaram	19,500 0 0			
Deposit on account of the maintenance of J. N. Tata's Memorial	1,200 0 0			
		2,51,900 0 0		
Interest and Instalments on account of Sinking, &c., Funds—			13,99,822 15 2	
Interest and Instalments on account of Sinking Funds		1,26,89,883 5 9		
Interest and Instalment on account of Fire Insurance, &c., Funds		8,94,843 0 7		
			1,35,84,726 6 4	
Cheques Payable			2,27,24,020 0 3	
				4,85,66,883 8 4
			Total Rs.	6,36,99,698 0 1

R. PEEL,
Acting Chief Accountant.

(including Transfers) of the BOMBAY MUNICIPALITY for the Year March 1913—*concld.*

	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
MUNICIPAL FUND—*contd.* and brought forward ...				2,58,03,738 14 2
DEPOSITS—*contd.* and brought forward			1,00,34,818 5 8	
Deposits from Contractors, &c.—				
In Cash— Rs. a. p.				
(*a*) From Contractors 2,70,152 15 0				
(*b*) ,, private parties received through Departmental Officers. 1,00,622 2 0				
(*c*) Other Deposits 2,38,678 1 11				
	6,09,453 2 11			
In Government Paper kept in Office	1,22,200 0 0			
Do. lodged with the Bank of Bombay...	82,000 0 0			
On account of work performed for private parties ...	33,611 15 5			
		8,47,265 2 4		
Government of Bombay on account of Income Tax ...		25,489 13 0		
Profit on Sale of Stores	4,354 4 9			
Miscellaneous Receipts, Stores Department—Supervision Charges on Stores sold	295 3 8			
		4,649 8 5		
Court Attachments		2,050 0 9		
Interest realized on Government, &c., Paper lodged by the Municipal Employés, Contractors, &c.		4,911 7 9		
(Government of Bombay) Land Conveyance Licenses, &c.—				
Through Chief Accountant on account of License Fees, Badges, &c....		25,085 2 0		
Securities of Municipal Employés and Contractors returned by the Bank of Bombay for payment (kept in office)	82,000 0 0			
Paper Deposits from Municipal Employés and Contractors pending submission to the Bank of Bombay (kept in office)	1,28,600 0 0			
Contractors' securities held under objection	2,000 0 0			
		2,12,600 0 0		
			11,22,051 2 3	
Contribution from Government towards the cost of Primary School Buildings and their sites			1,30,427 14 4	
Cheques Payable			2,20,56,723 6 1	
				3,33,44,020 12 4
				6,31,47,759 10 6
Cash Balance (in Bank and Office Treasuries) on 31st March 1913				4,51,938 5 7
			Total ...Rs.	6,35,99,698 0 1

J. CRERAR,
Municipal Commissioner.

Appendix

STATEMENT showing the Principal Liabilities on account of Street Improvement incurred at rates finally made

Name of the Party.	Locality.	Actual area acquired.	AS ORIGINALLY	
			Rate per square yard.	Compensation for Land.
			Rs. a. p.	Rs. a. p.
Messrs. Pranjiwandas Kalidas, Lakhmidas Kalidas and Ramdas Kalidas.	Junction of Gujar Street and Khoja Street.	5·66	40 0 0	228 6 5
Mr. Khatri Usman Husein	Junction of Ali Umer Street and Baniar Road.	3·47	60 0 0	208 5 2
,, Mirza Ali Mahomed Khan Mirza Husein Khan.	Mutton Street	26	60 0 0	1,560 0 0
Sir D. M. Petit, Bart., and Miss Hamabai Framji Petit.	Kalbadevi Road and 1st Bholwada Lane, Bhuleshwar.	2·85	70 0 0	198 8 0
The Colaba Land and Mill Co.	Colaba Causeway	88·61	30 0 0	2,658 4 10
Mr. Motilal Hargowandas, Nagindas Motilal, Pranjiwandas Motilal and Dawarkadas Gangadas.	Fanaswadi, 2nd Street	41·78	25 0 0	1,044 8 0
The Vicar and Wardens of the Church of N. S. DeSalvacao.	Portuguese Church Road, Dadar	62·50	3 0 0	187 8 0
Dadysett Charity	Walkeshwar Road	1,099·15	16 4 0	17,861 3 0
Mr. Hakim Syed Mahomed Sha Kadri ...	Mahim Bazar Road	28·81	2 0 0	57 9 11
,, Anandrao Bhasker Javle	Lady Jamshedji Road	48·12	5 0 0	240 9 7
,, Panachand Javerchand	Shaik Memon Street	1·66	250 0 0	415 0 0
,, Haji Cassum Joosub	Proctor Street	29·80	20 0 0	596 0 0
,, Shavakshah Rustomji Bamanji ...	Junction of Babula Tank Road and Jail Road, North.	606·91	25 0 0	15,172 12 0
,, J. E. Saklatwalla...	Mori Road	1,047·25	5 0 0	5,236 4 0
,, Kazi Abdul Karim *bin* Kazi Noor Mahomed Porbundri.	Mahim Bazar Road	71·48	4 0 0	285 14 8
,, Ramkrishna M. Chonker	Portuguese Church Road, Dadar	81·88	2 0 0	163 12 2
,, Mangaldas Girdhardas Parekh... ...	Victoria Mill Premises at Damer Lane ...	145·76	10 0 0	1,457 9 7
Messrs. Zoolfikarkhan Alikhan Mahomed Miya and Tyab Haji Gul Mahomed, the Trustees.	Junction of Parel Road and Gujar Street ...	31·02	50 0 0	1,551 0 0
Mr. Alibhai Husoubhai Damarwala ...	Junction of Dharamsi Street and Gujar Street.	24·64	30 0 0	739 3 3
,, Raghunath Pandurang Mistri	1st Carpenter Street, Mazagon	24·53	5 0 0	122 10 5
Messrs. Shaik Tayabbhai Shaik Fakrudin, Shaik Hussonali Mulla Hakimji, J. P., Shaik Abdul Kader, Shaik Abdulali Moosaji, Shaik Esufalli Mulla and Alibhai Peerbhai Nalwalla, Trustees and Managers of the Old Musjid at Dhabhu Street.	Dhabhu Street	9·66	30 0 0	289 12 10
	Carried over ...	3,481·54	.....	50,274 11 10

No. 14.

originally sanctioned and at rates which were subsequently increased and on which payments were during 1912-13.

PROPOSED.		AS SUBSEQUENTLY SANCTIONED AND PAID.				REMARKS.
Compensation for Structure.	Total.	Rate per square yard.	Compensation for Land.	Compensation for Structure.	Total.	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
.....	228 6 5	60 0 0	339 9 7	*14 13 10	354 7 5	* Interest from 30th July 1909 to 16th December 1910 at 6 per cent. per annum.
176 0 0	384 3 2	100 0 0	347 0 0	176 0 0	523 0 0	
.....	1,560 0 0	80 0 0	2,080 0 0	.....	2,080 0 0	
.....	198 8 0	.....	450 0 0	.....	450 0 0	Settled for lump sum.
.....	2,658 4 10	55 0 0	4,873 8 10	.....	4,873 8 10	
.....	1,044 8 0	35 0 0	1,462 4 10	.....	1,462 4 10	
455 0 0	642 8 0	4 0 0	250 0 0	455 0 0	705 0 0	
2,885 7 2	20,746 10 2	25 0 0	27,478 12 0	2,885 7 2 *1,689 9 6	32,053 12 8	* Interest from 28th July 1911 to 30th June 1912 at 6 per cent. per annum.
210 0 0	267 9 11	4 0 0	115 3 10	1,315 0 0	1,430 3 10	
59 0 0	299 9 7	7-8	360 14 5	59 0 0	419 14 5	
275 0 0	690 0 0	400 0 0	664 0 0	275 0 0	939 0 0	
.....	596 0 0	27-8	819 8 0	.....	819 8 0	
.....	15,172 12 0	.....	21,750 0 0	.....	21,750 0 0	Settled for lump sum.
2,017 0 0	7,253 4 0	6 0 0	6,283 8 0	3,594 4 9 *541 10 11	10,419 7 8	* Interest from 10th August 1911 to 11th July 1912 at 6 per cent. per annum.
1,219 0 0	1,504 14 8	5 0 0	357 6 5	1,563 0 0 *10 10 0	1,931 0 5	* Court Cost.
253 0 0	416 12 2	4 0 0	327 8 3	253 0 0	580 8 3	
596 0 0	2,053 9 7	15 0 0	2,186 6 5	2,016 0 0	4,202 6 5	
743 0 0	2,294 0 0	75 0 0	2,326 8 0	743 0 0	3,069 8 0	
982 0 0	1,721 3 3	60 0 0	1,478 6 5	982 0 0	2,460 6 5	
.....	122 10 5	10 0 0	245 4 10	.....	245 4 10	
414 0 0	763 12 10	60 0 0	579 9 7	414 0 0	993 9 7	
10,284 7 2	6 0,559 3 0	.....	74,775 7 5	16,987 8 2	91,762 15 7	

Appendix

STATEMENT showing the Principal Liabilities on account of Street Improvement incurred at rates finally made

Name of the Party.	Locality.	Actual area acquired.	AS ORIGINALLY	
			Rate per square yard.	Compensation for Land.
			Rs. a. p.	Rs. a. p.
	Brought forward	3,481·54	... ...	50,274 11 10
Mr. Haridas Damoder Anandji	Bazar Gate Street	12·01	50 0 0	600 8 0
Bai Manekbai, wife of Mahomedally Sulleymanji Kurwa and Bai Amtoobai, wife of Rajbhai Ebrahimji.	Dharamsi Street	21·97	30 0 0	659 1 7
Bai Aishabai Mahomedalli Rogay and Bai Rabiabai *alias* Mumtaz Begum, wife of Nawabzada Nasrullakhan, Noor Mahomed Beg Mahomed and Aboo Bucker Abdul Rehman.	Mahim Bazar Road	525·15	4 0 0	2,100 9 7
Mr. Nemchand Manekchand	Mustan Tank Road	28·07	10 0 0	280 11 2
„ Sorabji Edulji Warden	Charni Road	69·45	40 0 0	2,778 0 0
„ Hussonali Gulam Husein	Abdul Rahiman Street	43·85	275 0 0	12,058 12 0
„ Sayaji Nageoji	Parbhadevi Road	650·41	4 0 0	2,601 10 8
		4,832·45		71,354 0 5

						Rs. a. p.
Average rate per square yard for compensation	for	land	as	originally	sanctioned	14·76 or 14 12 2
Do.	do.	do.	do.	subsequently	do.	21·22 or 21 3 7
Do.	do.	do.	for	structure as originally	do.	3·13 or 3 2 1
Do.	do	do.	do.	as subsequently	do.	4·72 or 4 11 7
Do.	do.	do.	for	total amount as originally	do.	17·89 or 17 14 3
Do.	do.	do.	do.	subsequently	do.	25·94 or 25 15 2, or 45 per cent.

R. PEEL,
Acting Chief Accountant.

No. 14.

originally sanctioned and at rates which were subsequently increased and on which payments were during 1912-13.

PROPOSED.		AS SUBSEQUENTLY SANCTIONED AND PAID.				REMARKS.
Compensation for Structure.	Total.	Rate per square yard.	Compensation for Land.	Compensation for Structure.	Total.	
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
10,234 7 2	60,559 8 0	.....	74,775 7 5	16,987 8 2	91,762 15 7	
.....	600 8 0	.....	900 0 0	.....	900 0 0	Settled for Lump sum.
1,197 0 0	1,856 1 7	50 0 0	1,098 8 0	1,197 0 0	2,295 8 0	
964 0 0	3,064 9 7	7 0 0	3,676 0 10	624 0 0	4,300 0 10	
.....	280 11 2	20 0 0	561 6 4	*47 2 8	608 9 0	* Interest from 19th August 1911 to 10th February 1913 at 6 per cent. per annum.
.....	2,778 0 0	55 0 0	3,819 12 0	.....	3,819 12 0	
.....	12,058 12 0	300 0 0	13,155 0 0	.....	13,155 0 0	
2,660 0 0	5,261 10 3	7 0 0	4,552 13 11	3,995 0 0	8,547 13 11	
15,105 7 2	86,459 7 7	.....	1,02,539 0 6	22,850 10 10	1,25,389 11 4	

J. CREBAR,
Municipal Commissioner.

Appendix

Income of the Bombay Municipality from the year 1865

Year.	Gross Valuation.	House Rate.	Police Rate.	Lighting Rate.	Wheel Tax and Tolls.	Licenses for trades, Land Conveyances, Music, etc.	Town Duties.	Liquor Licenses.	Tobacco Licenses.		Contribution from Insurance Companies or Fire Tax.
	TAXATION PROPER.										
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs	Rs.	Rs.		Rs.
1865	1,30,14,655	10,57,379	....	....	2,32,698	2,023	5,04,789	1,45,873	.. ..	.. .	...
1866	1,48,94,893	7,16,004	2,83 83	98 417	3,13,330	2,72,695	5,132	46,924	1,20,390	....	....
1867	1,65,09,535	2,84,068	4,11,940	1,42,849	2,38,178	2,05 536	.....	1,04,836	1,18,426	....	....
1868	1,47,49,975	9,20,587	3,75,907	2,46,071	2,68,514	2,08,829	....	1,20,566	1,36,763	....	. ..
1869	1,39,41,260	7,99,316	2,59,583	2,48,466	2,57,574	1,50,351	3,03,298	2,49,077	1,51,178	....	....
1870	1,36,20,885	7,22,783	2,87,643	1,46,994	2,50,581	28,147	5,94,989	1,23 69:	1,39,830	...4	....
1871	1,34,26,845	6,75,489	2,30,409	2,30,256	2,05,521	7,655	4,51,496	1,15,170	1,28,046	....	....
1872	1,28,33,810	7,09,983	2,41,774	2,41,348	2,04,097	5,862	4,67,638	59,914	1,47,654	....	....
1873	1,26,71,816	7,01,013	2,37,282	2,37,050	2,16,053	87	4,46,924	2,79,074	1,48,792	....	....
1874	1,19,65,290	5,94,814	2,29,102	2,27,525	2,48,217	3,908	4,85,649	1,24,507	1,47,779	....	16,519
1875	1,16,55,068	5,52,738	2,20,569	2,16,632	2,45,274	591	6,72,987	1,58,980	1,45,956	....	14,355
1876	1,12,75,710	5,73,458	2,17,681	2,13,094	2,38,487	2,113	6,36,147	1,41,725	1,48,356	....	13,922
1877	1,14,77,640	5,47,541	2,20,061	2,14,670	2,44,369	1,948	7,51,013	85,697	1,49,562	....	19,164
		Consolidated Rate.									
1878	1,18,37,118	....	9,35,034	....	2,14,560	....	6,98,006	1,60,565	1,52,229	....	22,573
1879	1,14,93,417	....	10,52,773	....	2,25,569	3,563	5,33,617	1,43,750	1,65,029	....	20,761
1880	1,17,89,525	....	8,99,234	....	2,31,825	846	6,57,784	1,43,750	1,61,127	....	23,911
1881	1,17,14,470	@8%	10,58,810	....	2,31,866	1,502	6,37,482	1,43,750	1,61,625	....	24,099
						For 15 months, i. e., from 1st January 1882 to 31st March 1883, the calendar					
1882-83	1,25,80,263	....	12,34,075	....	4,12,027	....	8,17,199	1,43,750	2,06,014	....	32,000
1883-84	1,46,64,507	@8%	9,63,538	....	2,55,227	3,417	6,67,113	1,79,687	1,74,306	....	24,708
1884-85	1,52,32,744	Do.	11,80,307	....	3,09,552	4,305	7,73,431	1,43,750	1,72,622	....	25,517
1885-86	2,00,25,523	Do.	14,61,305	....	3,32,185	4,525	6,79,293	1,43,750	1,79,177	.. .	29,914
1886-87	2,16,27,220	@8½%	14,88,867	....	3,19,561	3,913	10,12,152	1,43,750	1,90,250	....	29,776
1887-88	2,27,92,346	@8%	14,07,013	....	3,36,993	4,050	9,94,750	1,43,750	1,84,168	(a) fire tax	37,657
1888-89	2,39,51,043	Do	14,69,024	....	3,14,571	45,471	7,25,897	1,43,750	1,91,297	@½%	34,768
1889-90	2,73,64 359	Do.	15,82,509	....	3,25,616	52,792	6,67,965	1,43,750	1,90,922	....	(a) 79,187
1890-91	2,82,27,355	Do.	15,64,932	....	3,56,648	60,451	9,78,520	1,42,750	1,80,284	@½%	1,25,345
1891-92	2,85,80,023	Do.	17,55,081	....	3,42 973	75,101	8,40,222	1,43,750	1,86,151	Do	1,64,263
1892-93	2,64,03,982	Do.	17,78,801	....	3,44,905	79,376	9,73,928	1,43,750	1,86,703	Do.	1,65,838
1893-94	2,69,79,728	Do.	17,49,321	....	3,51,175	85,817	8,97,256	1,43,750	1,86,829	@1%	1,10,504
1894-95	2,76,13,741	Do	17,49,385	....	3,56,682	95137	8,88,542	1,43,750	2,03,343	Do.	1,09,325
1895-96	2,82,56,8-1	Do	17,67,000	...	3,65,525	96,335	9,10,851	1,43,750	2,17,475	Do.	1,10 437
1896-97	2,89.27.618	Do.	17,45,829	...	2,46,681	74,085	6,45,144	1,43,750	1,82,867	Do.	1,09,136
1897-98	2,94,82,805	Do.	19,35,325	....	3,46,838	88,563	2,51,424	1,43,750	1,89 323	Do.	1,20,961
1898-99	2,98,53,636	@9%	21,06.995	....	3,39,197	87,764	11,17.161	1,43,750	2,08,544	Do.	1,17,219
1899-1900 ..	3,04 17,091	@12½%	28,74,289	....	3,02,748	90,346	15,94,721	1,43,750	2,21,338	Do.	1,20,127
1900-1901 ..	3,13,75,106	Do.	28,94,971	....	3,21,366	93,702	11,31,371	1,43,750	2,16,939	Do.	1,20,647
1901-02	3,18,11,625	@10%	25,72,901	....	3,40,747	92,733	8,67,123	1,43,750	2,32,965	Do.	1,27,570
1902-03	3,18,91,400	Do.	25,81,510	....	3,71,013	1 02 070	12,19.348	1,43,750	2,44 092	Do.	1,29,049
1903-04	3,44,49,599	Do.	27,64.974	....	3,98,070	1,05,811	11,68,973	1,43,750	2,40 064	Do.	1,38,163
1904-05	3,54,15.934	Do.	30,26,572	.....	4,19,587	1,03,772	14,16,943	1,43,750	2,60,744	Do.	1,51,302
1905-06	3,81,90,177	@8½%	27,55.778	....	4,48,343	98,923	11,68,450	1,43,750	2,72,779	@½%	1,20,057
1906-07	4,14,48,901	Do.	29,58 345	....	4,42,749	1,03,221	13,34,074	1,43,750	2,65 828	Do.	1,26,631
1907-08	4,42,79,940	@8%	29,74,517	....	4,29,892	1,06,284	13,90,203	1,43,750	2,80 355	Do.	1,29,328
1908-09	4,68.25,766	Do.	31,47,349	....	4,79,857	1,19,278	12,96,320	1,43,750	2,78,830	Do.	1,47,522
1909-10 .. .. (2 m)	4,94,44,967	@9½%	38,05,816	....	5,01,552	97,754	14,23,491	1,43,750	2,80,614	Do.	1,63,267
1910-11	5,20,51,478	@10½%	43,61,860	....	4,72,198	90,314	16,86,660	1,43,750	2,52,907	@½%	2,15,094
1911-12.. ..	5,36,02,464	Do.	47,42,693	....	4,69,487	1,13,777	12,47,097	1,43,750	2,78,896	Do.	2,33,627
1912-13	5,51,71,773	Do.	47,18,933	....	5,23,522	1,21,773	17,42,131	1,43,750	2 33,526	Do.	2,35,029

R. PEEL,
Acting Chief Accountant.

No. 15.

to close of the financial year 1912-1913.

Total Taxation Proper.	SERVICE RENDERED. Halalkhore Tax.	SERVICE RENDERED. Water Tax.	MISCELLANEOUS. Total service rendered.	MISCELLANEOUS. Government contribution for Police and City Improvement Trust.	MISCELLANEOUS. Returns from Property and Miscellaneous.	Total Income.	Year.	Population by Census.	Incidence of taxation per head of population.	Five years' average annual Income.
Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.			Rs. a. p.	
19,42,762	....	1,78,719	1 78,719	....	1,42,386	23,63,767	1865	8,16,662	2 9 6	
18,56,545	1,92,352	5,49,121	8,41,973	....	2,06,154	29,14,672	1866	....	3 5 1	
23,44,905	1,45,524	3,73,006	5,18,330	1,50,000	1,26,789	30,40,324	1867	....	3 6 1	31,12 976
22,76,927	3,91,454	4,08,377	8,89,831	2,60,129	4,25,787	38,32,674	1868	....	3 14 0	
24,18,773	2,30,562	3,62,998	5,93,560	1,09,882	2,71,011	33,93,226	1869	....	3 11 0	
22,44,659	2,13,197	3,66,986	5,80,183	1,09,882	2,73,025	33,07,749	1870	.....	3 9 3	
20,44,042	1,99,986	3,57,578	5,57,564	....	2,69,554	28,71,160	1871	. ..	3 2 11	
20,78,240	2,17,071	4,07,835	6,24,906	....	3,45,185	35,48,331	1872	9,44,405	4 3 1	31,06,534
20,66,275	2,00,590	4,00,639	6,01,229	....	4,56,604	33,24,108	1873	.....	4 7 2	
20,78,029	1,52,235	3,63,087	5,55,322	....	3,47,980	29,81,322	1874	....	4 1 4	
22,28,085	1,94,215	3,90,212	4,84,427	90,000	3,31,014	31,43,526	1875	....	4 3 7	
21,84,986	2,04,077	3,08,377	5,12,454	90,000	3,90,283	31,77,723	1876	....	4 2 11	
22,34,031	2,01,299	3,11,823	5,13,122	90,000	4,04,299	32,41,452	1877	....	4 4 2	32,09,805
21,79,968	1,96,380	2,92,780	4,88,160	90,000	3,87,025	31,45,153	1878	....	4 2 2	
21,45,062	2,42,015	3,54,798	5,96,813	90,000	5,09,299	33,41,174	1879	....	4 4 0	
21,18,977	2,03,047	3,90,703	5,93,750	75,000	4,64,173	32,51,870	1880	....	4 3 4	
22,59,094	2,81,805	5,24,819	8,06,624	50,000	7,57,976	38,73,694	1881	7,73,196	3 15 5	
being changed to the financial year, the income was as follows:—										39,37,843
28,45,965	3,28,916	6,70,677	9,99,593	91,125	6,75,575	46,12,240	1882-83	....	4 15 6	
22,37,996	2,43,557	5,47,047	7,91,204	85,672	5,72,400	37,37,272	1883-84	....	3 15 8	
25,33,967	2,89,616	5,96,123	8,85,739	90,000	6,54,162	42,13,868	1884-85	....	4 7 9	
28,30,449	3,16,787	6,65,379	9,82,157	90,000	8,71,367	44,73,973	1885-86	....	4 14 10	
31,88,299	3,18 630	7,74,651	10,93,281	....	6,20,214	49,01,811	1886-87	....	5 8 7	
31,10,581	3,72,268	8,83,724	12,55,982	....	7,39,967	51,06,530	1887-88	....	5 10 4	49,70,126
29,21,718	3,90,039	9,63,804	13,53,843	....	6,90,632	49,65,193	1888-89	....	5 8 5	
30,41,841	4,73,919	11,23,006	15,96,925	.. .	7,03,403	53,42,169	1889-90	....	5 15 11	
34,19,930	5,37,222	11,49,198	16,76,420	....	(a) 10,78,551	61,65.901	1890-91	....	6 9 3	
35,07,542	5,55,827	11,81,479	17,37,306	....	9,88,335	62,33,183	1891-92	8,21,764	6 6 1	
36,68,001	6,22,200	14,07,081	20,29,281	....	9,75,861	66,72,943	1892-93	....	6 14 11	64,74,913
35,24,752	5,82,026	13,86,828	19,68,854	....	(b) 13,69,189	67,62,695	1893-94	.....	6 9 0	
35,47,569	6,81,557	13,88,265	20,69,822	....	9,21,981	65,33,372	1894-95	....	6 13 4	
36,11,873	6,67,612	14,42,295	21,09,707	.. .	(c) 10,49,630	67,61,710	1895-96	....	6 15 2	
31,47,894	6,88,486	13,98,410	20,86,896	....	9,74,883	62,08,378	1896-97	....	6 5 10	
37,76,284	7,35,485	13,23,852	20,65,337	....	(d) 13,03,939	71,45,560	1897-98	....	7 1 8	72,21,595
41,20,620	7,13,122	15,00,970	22,14,092	....	8,27,199	71,61,911	1898-99	....	7 11 4	
53,47,419	7,25,264	17,72,967	24,98,231	....	9,84,167	88,29,817	1899-1900	....	9 8 9	
49,24,736	7,14,440	17,35,635	24,50,075	....	10,23,037	84,02,848	1900-01	....	8 15 7	
43,71,989	7,88,439	15,47,120	23,35,559	....	10,59,181	77,66,729	1901-02	7,76,006	8 10 3	
47,90,830	7,95,984	16,13,976	23,09,960	....	10,74,898	81,75,688	1902-03	....	9 2 4	84,32,909
49,59,505	8,10,610	15 71,566	23,82,176	....	11,40,944	84,82,625	1903-04	....	9 7 4	
55,22,670	8,75,194	17,14,453	25,89,647	....	12,23,794	93,36,111	1904-05	....	10 7 3	
50,06,080	9,32,455	18,57,780	27,90,435	....	12,96,024	90,92,539	1905-06	....	10 0 9	
53,76,598	9,91,362	19,38,429	29,29,791	....	13,42,112	96,48,501	1906-07	9,77,922	8 7 10	
54,64,330	10,46,874	19,48,830	29,95,704	....	14,29,290	98,89,324	1907-08	....	8 10 5	1,06,26,055
56,12,966	11,19,322	20,04,189	31,23,411	....	15,49,671	1,02,86,048	1908-09	....	8 14 11	
64,16,245	11,92,348	20,11,788	32,04,134	....	15,93,485	1,12,13,854	1909-10	....	9 13 5	
72,38,583	12,32,951	19,95,327	32,28,278	....	17,99,288	1,21.96,149	1910-11	9,79,445	10 11 0	
72,29,327	12,92,697	20,79,120	33,71,817	....	20,54,645	1,26,55,789	1911-12	....	10 13 8	1,25,31,176
77,66,564	13,50 823	21,70.948	35,21,771	....	(e) 14,83,244	1,27,41,389	1912 13	....	11 8 5	

(a) Includes Rs. 2,32,544 for arrear recoveries for work done.
(b) Rs. 4,55,699 adjusted on account of premia on loans.
(c) Includes premia of Rs. 97,749 on loan raised.
(d) Includes rebate of plague expenses amounting to Rs. 4,37,055.
(e) Exclusive of the amount of interest credited on Sinking and Special Funds which was hitherto treated as Income.

J. CRERAR,
Municipal Commissioner.

Appendix

Expenditure of the Bombay Municipality from the

Year.	General Superintendence.	Assessment and Collection.	Fire Brigade.	Public Works (Engineering) Department.	Public Health Department.	General Stores.	Pensions and Gratuities.	Police Charges.	Education.	Medical Relief.	Debt.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1865	94,354	1,26,472	Not traceable.	31,52,722	3,15,914	Not traceable.	345	1,41,931	....	....	....
1866	1,31,623	58,338		13,32,917	14,40,293		14,430	3,96,169	....	.. ..	20,354
1867	61,337	71,531		17,38,626	14,26,221		2,580	4,25,423	....	.. .	73,360
1868	70,990	87,602	22,708	12,29,594	10,45,862	9,012	3,733	4,17,083	....	....	2,19,577
1869	1,09,879	1,25,891	23,315	12,81,429	8,57,425	8,312	5,634	3,25,637	....	....	3,81,368
1870	1,32,202	1,12,458	30,996	13,73,897	8,29,784	8,046	10,354	4,24,905	..	....	4,46,187
1871	1,22,853	1,12,351	31,361	16,11,727	7,84,485	6,482	7,758	5,20,579	7,948	....	4,75,704
1872	1,15,930	1 38,354	24,435	12,83,987	7,61,854	*	7,221	3,27,209	9,321	....	2,52,971
1873	1,16,575	1,41,308	20,546	10,70,919	7,96,860	*	6,996	3,40,892	10,000	. ..	5,06,270
1874	1,11,860	1,29,023	25,316	10,53,829	7,38,139	*	8,030	3,44,325	10,000	....	5,09,023
1875	1,13,902	1,36,708	20,063	9,90,091	7,42,953	*	8,691	3,52,920	10,000	36,000	7,15,561
1876	1,09,189	1,42,267	37,754	9,70,195	7,57,681	....	11,157	3,57,734	10,000	36,000	7,09,127
1877	1,10,164	1,43,672	24,193	8,96,548	7,49,550	....	8,301	3,54,535	10,000	36,000	6,27,792
1878	1,15,597	1,44,467	27,517	8,13,057	7,90,481	....	8,008	3,61,561	15,000	36,000	8,06,221
1879	1,21,997	1,34,372	22,980	8,35,687	8,04,295	....	12,084	3,64,304	17,060	36,000	6,91,903
1880	1,28,493	1,37,726	24,800	8,86,101	7,52,410	....	7,749	3,59,166	17,500	36,000	6,42,850
1881	1,28,951	1,52,107	29,242	9,16,699	7,98,021	....	8,658	3,57,752	17,500	20,435	7,47,209
	For 15 months from 1st January 1882 to 31st March 1883, the calendar										
1882-83	1,82,715	1,87,858	73,685	14,91,106	10,14,785	....	12,803	4,84,024	28,125	34,948	12,28,882
1883-84	2,01,021	1,49,317	55,389	10,51,338	9,16,310	....	40,333	2,62,508	22,500	27,832	8,12,061
1884-85	1,65,258	1,04,917	64,977	11,51,551	9,19,967	....	23,293	3,01,748	22,500	34,512	7,37,608
1885-86	1,66,827	1,84,717	43,354	12,34,529	9,95,507	....	18,318	3,59,223	23,700	31,349	7,87,527
1886-87	1,73,990	2,17,134	70,904	13,03,859	10,10,118	....	19,133	2,61,914	32,604	43,386	8,03,553
1887-88	1,70,945	2,12,138	69,670	13,64,393	10,76,736	....	30,531	2,61,348	1,34,715	40,753	23,27,682
1888-89	1,69,223	1,98,820	1,12,328	14,91,641	11,36,410	....	19,470	2,59,140	50,982	36,857	14,99,115
1889-90	1,77,133	1,92,643	93,907	13,62,241	11,96,577	....	29,139	2,58,285	60,358	35,246	14,85,711
1890-91	1,82,198	2,23,354	1,29,291	15,92,034	13,02,164	....	32,127	2,58,285	68,646	38,601	15,52,139
1891-92	1,91,022	2,41,902	88,671	15,98,073	12,92,529	....	33,890	2,58,285	80,722	50,284	16,37,495
1892-93	1,90,929	2,52,143	1,47,694	17,72,512	13-01,562	....	29,845	3,63,625	87,565	49,576	21,97,223
1893-94	2,26,517	2,42,413	1,06,315	15,41,703	13,39,614	....	37,560	3,30,272	88,015	52,476	21,27,467
1894-95	2,11,621	2,37,771	1,14,144	16,37,325	13,70,168	....	46,368	3,74,022	87,299	61,456	20,26,571
1895-96	1,99,317	2,40,990	1,16,991	17,31,317	13,75,234	....	48,432	5,01,096	88,481	56,260	21,19,651
1896-97	1,99,641	2,48,159	1,07,854	15,55,649	14,08,867	....	58,601	5,51,589	88,889	53,101	20,56,122
1897-98	2,14,792	2,50,483	1,18,508	16,10,357	15,86,633	....	70,096	5,90,000	1,02,624	54,293	22,60,571
1898-99	2,10,380	2,57,182	1,09,976	14,19,617	16,89,174	....	56,866	5,01,013	1,14,776	55,201	24,81,138
1899-1900	1,97,642	2,72,850	1,17,038	16,01,898	20,30,444	....	68,034	5,00,000	1,17,990	54,997	23,40,289
1900-01	2,28,044	3,26,719	1,18,639	17,01,178	21,68,479	....	75,922	6,02,455	1,11,930	58,977	25,03,311
1901-02	2,13,036	2,94,004	1,21,728	15,71,437	20,07,064	....	56,440	5,00,022	1,12,513	57,000	26,56,575
1902-03	2,16,767	2,92,239	1,10,182	15,30,256	20,05,929	....	68,852	5,97,504	1,10,474	56,290	27,11,361
1903-04	2,34,062	2,99,459	1,24,113	16,65,761	19,79,074	....	57,487	5,00,381	1,12,688	54,625	29,18,564
1904-05	2,29,315	3,18,017	1,34,282	18,41,039	18,46,402	15,904	74,334	5,01,076	1,39,763	57,000	28,23,563
1905-06	2,43,603	3,24,580	1,25,986	19,54,844	19,91,160	19,769	71,778	5,00,000	1,61,420	57,606	29,82,471
1906-07	3,06,306	3,29,381	1,58,015	19,29,665	21,46,791	27,369	75,303	5,01,862	1,65,815	56,218	31,77,715
1907-08	2,59,564	3,66,403	1,69,574	21,17,200	22,87,706	31,828	74,395	1,38,450	2,63,350	4,50,151	32,26,943
1908-09	2,71,046	3,73,684	1,71,667	23,93,913	24,34,002	29,456	65,623	....	2,76,685	4,64,555	32,98,247
1909-10	3,09,102	3,69,460	1,62,138	23,91,606	23,64,080	30,859	69,817	....	2,93,256	4,62,579	33,77,184
1910-11	2,89,088	3,85,546	1,75,990	24,28,929	21,03,537	31,063	84,294	. ..	4,17,124	4,64,416	36,07,569
1911-12	2,93,600	3,75,204	1,74,706	24,92,972	21,40,626	33,054	86,701	....	4,20,311	4,72,868	37,14,629
1912-13	3,14,525	4,40,506	3,20,026	25,59,312	23,15,541	34,069	96,913	....	4,18,511	4,46,160	33,43,357

* Combined with Controller's Office.

R. PEEL,
Acting Chief Accountant.

No. 15 (A).

year 1865 to the year 1912-1913.

Contribution to the Bombay Improvement Trust.	Public Gardens.	Stores, Plant and Live Stock.	Municipal Building Fund.	Road Improvement Fund.	Investments Fund.	Plague Expenses.	Miscellaneous.	Total.	Year.	Five years' average annual Expenditure.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.
....	....	5,10,250	....	....	....	....	1,17,345	49,59,333	1865	
....	....	82,059	....	....	....	....	1,25,240	36,01,922	1866	
....	....	2,70,545	....	....	....	....	1,46,623	42,16,346	1867	38,77,203
....	....	3,32,722	....	....	....	....	37,775	34,77,958	1868	
....	....	....	....	....	....	....	42,666	31,31,358	1869	
....	....	....	....	....	....	....	23,416	33,92,185	1870	
....	27,278	....	....	....	....	....	88,213	38,04,681	1871	
....	11,857	....	....	....	....	....	(a) 1,57,383	31,15,888	1872	32,69,595
....	14,473	....	....	....	....	....	22,354	30,44,577	1873	
....	18,282	....	....	....	....	....	46,645	29,90,693	1874	
....	21,638	....	....	....	....	....	(b) 1,19,851	32,65,027	1875	
....	20,221	....	....	....	....	....	47,696	31,90,438	1876	
....	21,190	....	....	....	....	....	55,559	30,36,635	1877	31,68,669
....	17,709	....	....	....	....	....	71,103	22,70,224	1878	
....	20,756	....	....	....	....	....	51,791	31,11,122	1879	
....	19,463	....	2,50,000	....	....	....	44,321	30,57,992	1880	
being changed to the financial year, the expenditure was :—							(c) 3,52,835	37,98,872	1881	
....	26,869	....	50,000	19,000	....	....				
....	20,283	....	20,000	....	....	....	33,740	47,53,632	1882-83	38,41,465
....	22,738	....	801	....	....	....	33,934	37,15,812	1883-84	
....	23,864	....	99,199	....	....	....	(d) 2,11,150	38,81,020	1884-85	
....	38,326	....	49,779	....	....	....	98,226	40,66,940	1885-86	
....	42,123	....	50,231	....	....	....	57,562	41,76,362	1886-87	
....	43,939	....	55,577	....	....	....	32,436	58,12,690	1887-88	48,59,951
....	63,153	....	24,459	....	3,000	....	(e) 1,12,366	52,01,268	1888-89	
....	87,905	....	28,907	....	3,113	....	56,553	50,42,405	1889-90	
....	77,225	....	27,905	....	3,274	....	1,85,807	56,34,361	1890-91	
....	98,964	....	....	....	3,386	....	2,07,780	57,92,073	1891-92	
....	(f) 2,80,453	....	....	....	5,64,372	....	[illegible]	95,45,512	1892-93	52,69,972
....	93,969	....	....	....	44,056	....	28 92	69 83,928	1893-94	
....	64,928	....	....	....	1,46,160	....	[illegible]	63,73 486	1894-95	
....	60,312	....	....	....	1,42,601	4,87,055	15,519	67,02,316	1895-96	
....	71,447	....	....	....	36,478	5,00,000	35,503	70,04,743	1896-97	
....	74,959	....	....	....	37,425	—5,00,000	1,20,712	74 96,959	1897-98	71,87,147
....	75,250	....	....	....	35,316	— 43,694	(g) { 8,12,546 19,673 }	73,39,026	1898-99	
4,74,605	69,870	....	....	....	58,409	— 922	32,385	73,92,480	1899-1900	
4,81,000	57,685	....	....	....	50,253	....	1,86,444	86,84,058	1900-01	
5,00,000	58,874	....	....	....	58,136	....	,695	82,26,458	1901-02	
3,50,000	67,422	....	.. .	....	33,265	....	75,124	84,53,398	1902-03	84,67,384
2,50,000	66,092	....	....	....	35,399	1,81,920	34,106	84,37,390	1903-04	
2,90,000	64,751	....	....	....	30,377	2,26,538	67,612	85,91,618	1904-05	
3,00,000	64,735	....	....	....	39,526	2,43,044	(h) 3,02,359	93,74,242	1905-06	
2,56,681	75,188	....	....	....	44,445	1,95,517	18,945	95,20,790	1906-07	
4,50,000	92,905	...	....	....	47,843	2,23,328	1,30,930	1,01,89,201	1907-08	1,02,22,231
7,80,000	98,364	....	....	....	1,21,917	2,00,915	37,922	1,06,30,126	1908-09	
8,25,000	91,210	....	....	....	49,473	1,87,234	(i) 3,65,173	1,13,97,050	1909-10	
8,85,000	76,091	....	....	....	67,633	1,55,903	1,31,399	1,12,81,872	1910-11	
9,25 000	83,982	....	....	....	10,000	1,47,763	2,25,852	(j) 1,14,84,562	1911-12	1,14,82,674
								(k) 1,16,81,587	1912-13	

(a) Includes write-off for loss in stores of Rs. 1,45,993.
(b) Includes Rs. 50,000 for visit of H. R. H. the Prince of Wales.
(c) Includes special adjustment of Rs. 3,24,827 for re-arranging the different loan funds.
(d) Includes loss of Rs. 1,84,774 on the sale of the Panwel Brick Factory.
(e) Includes Rs. 62,043 by loss on sale of investments.
(f) Includes Rs. 1,94,565 for land acquired.
(g) Write-off on account of frontage lands in Agripada.
(h) Includes contribution of Rs. 3,00,000 towards celebrating the visit of T. R. H. the Prince and Princess of Wales.
(i) Includes charges for grain compensation and local allowance and the loss sustained in the sale of unserviceable stores written-off.
(j) Excludes Rs. 5,00,000 transferred from revenue for writing off a portion of the Plague expenditure advanced from Loan Funds.
(k) Excludes Rs. 3,10,053 transferred from revenue for writing off a portion of the Plague expenditure advanced from Loan Funds as well as the amount of investments of interest realized on sinking and Special Funds.

J. CRERAR,
Municipal Commissioner.

Appendix No. 16.

CONTRASTED STATEMENT OF INCOME AND EXPENDITURE OF THE BOMBAY MUNICIPALITY FROM 1865 TO 1912-13.

YEAR.	Income.	Expenditure.	DIFFERENCE.	
			More.	Less.
	Rs.	Rs.	Rs.	Rs.
1865	23,63,787	49,59,333	.....	25,95,546
1866	29,14,672	36,01,922	.....	6,87,250
1867	30,40,524	42,16,346	.....	11,75,822
1868	38,52,674	34,77,058	3,75,616	.....
1869	33,93,226	31,31,358	2,61,868	.....
1870	33,07,749	33,92,185	.....	84,436
1871	28,71,160	38,04,661	.....	9,33,501
1872	30,48,331	31,15,888	.....	67,557
1873	33,24,108	30,44,577	2,79,531	.....
1874	29,81,322	29,90,663	.....	9,341
1875	31,43,526	32,65,027	.....	1,21,501
1876	31,77,723	31,60,438	17,285	.....
1877	32,41,452	30,36,535	2,04,917	.....
1878	31,45,153	32,70,224	.....	1,25,071
1879	33,41,174	31,11,122	2,30,052	.....
1880	32,51,870	30,57,992	1,93,878	.....
1881	38,73,694	37,98,872	74,822	.....
From 1st January 1882 to 31st March 1883 (15 months).	46,12,240	47,53,632	.....	1,41,392
1883-1884	37,37,272	37,15,812	21,460	.....
1884-1885	42,13,868	38,81,020	3,32,848	.....
1885-1886	44,73,973	40,66,940	4,07,033	.....
1886-1887	49,01,814	41,76,362	7,25,452	.....
1887-1888	51,66,530	58,12,690	.....	6,46,160
1888-1889	49,66,193	52,01,258	.....	2,35,065
1889-1890	53,42,169	50,42,405	2,99,764	.....
1890-1891	61,65,901	56,84,861	4,81,040	.....
1891-1892	62,33,183	57,82,073	4,51,110	.....
1892-1893	66,72,943	65,45,512	1,27,431	.....
1893-1894	67,62,695	69,63,928	.....	2,01,233
1894-1895	65,39,372	63,73,486	1,65,886	.....
1895-1896	67,61,710	67,02,516	59,194	.....
1896-1897	62,08,978	70,04,743	.....	7,95,765
1897-1898	71,45,560	74,96,969	.....	3,51,409
1898-1899	71,61,911	73,39,026	.....	1,77,115
1899-1900	88,29,817	73,92,480	14,37,337	.....
1900-1901	84,02,848	85,84,058	.....	1,81,210
1901-1902	77,66,729	82,26,458	.....	4,59,729
1902-1903	81,75,688	84,53,398	.....	2,77,710
1903-1904	84,82,625	84,31,390	51,235	.....
1904-1905	93,36,111	85,91,618	7,14,493	.....
1905-1906	90,92,539	93,74,242	.....	2,81,703
1906-1907	96,48,501	95,20,790	1,27,711	.....
1907-1908	98,89,324	1,01,89,201	.....	2,99,877
1908-1909	1,02,86,048	1,06,30,126	.....	3,44,078
1909-1910	1,12,13,864	1,13,97,050	.....	1,83,186
1910-1911	1,21,96,149	1,12,81,872	9,14,277	.....
1911-1912	1,26,55,789	* 1,14,84,562	11,71,227	.....
1912-1913	1,27,41,589	(a)1,16,81,587	10,60,002	.....

* This is exclusive of Rs. 5,00,000 utilized towards writing off a portion of the Plague Expenditure
(a) Do. " 3,10,052-7-4 do. do. do.

R. PEEL,
Acting Chief Accountant.

J. CRERAR,
Municipal Commissioner.

REVENUE.

Report on the working of the Assessment and Collection Department for the year 1912-13 by B. D. Banaji, Esq., Assessor and Collector, forwarded with his No. 9762, dated 26th May 1913.

1. The total amount collected under all Heads, exclusive of Tolls, Miscellaneous Receipts and Fees, was Rs. 86,99,671-3-3 against the estimate of Rs. 84,17,189, a difference of Rs. 2,82,482-3-3, detailed as under :—

Taxes.	Estimate.	Actual collections including adjustments.	Increase.
	Rs.	Rs. a. p.	Rs. a. p.
General Tax...	48,95,000	49,87,982 4 2	92,982 4 2
Water Tax*	19,88,349	21,11,025 4 4	1,22,676 4 4
Halalkhor Tax	13,15,000	13,65,131 10 3	50,131 10 3
Wheel Tax	2,18,840	2,35,532 0 6	16,692 0 6
Total ...	84,17,189	86,99,671 3 3	2,82,482 3 3

* Exclusive of Meter Hire and receipts by the Hydraulic Engineer.

2. As compared with the total collections for 1911-12, *viz.*, Rs. 85,65,972-1-8, the collections for 1912-13, *viz.*, Rs. 86,99,671-3-3, are more by Rs. 1,33,699-1-7.

3. On the 31st March 1913 the outstandings for property taxes, charges for water by meter and wheel tax (private) were Rs. 53,517-4-5 against Rs. 70,758-1-7 on 31st March 1912, of which Rs. 17,513-3-11 have been collected or adjusted up to 26th May 1913, leaving at that date Rs. 36,004-0-6 for recovery for all previous years. Out of this sum Rs. 7,051-4-10 are in dispute on account of valuations, water supply by meter, &c., whilst Rs. 141-0-6 are irrecoverable.

4. Properties in the Assessment Book on 31st March 1913 were 61,336 as under against 59,721 on 31st March 1912 :—

Buildings	39,396
Saltpans	275
Lands (including Tanks, Wells, etc.)...	21,665
Total ...	61,336

Of this number 51,173 were assessed for the General Tax, 2,175 were exempted under Section 143 (1) (A) (B) of Municipal Act, 6,442 were not charged the General Tax, being small plots of waste lands, houses marked "Unfit for human habitation," the assessments of which were temporarily reduced to a nominal value of Rs. 6 for which no bills were issued. The number of Municipal properties which are not assessed under Section 143 (1) (b) of the Act is 1,546.

5. The number of buildings newly erected, demolished and enlarged in 1912-13 was 814, 826 and 306, respectively.

6. The Assessments of Properties contrasted with those of 1911-12 were :—

A

Year.	Original Assessment (Gross).	Amount after disposal of complaints.		Amount of subsequent reduction during the year by demolition and on complaints.	Gross amount after deduction of subsequent reduction.	Subsequent enhancement (New buildings, enlargements and under Assessments) (Gross).	Total Gross Assessment.	Increase—Final difference over preceding year's gross Assessment.	Rateable Assessment.	Classification of Rateable Assessment.			
		No. of complaints against opening Assessment.	Gross Assessment.							Chargeable with General Tax.	Exempted from General Tax Section 143 (1) (a)(b).	For which no General Tax bills issued.	Total Rateable Assessment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1911-12	5,26,75,685	5,737	5,32,00,637	11,48,388	5,[illegible]0,52,249	15,50,215	5,36,02,464	15,50,986	4,82,55,536	4,60,48,890	21,94,452	12,194	4,82,55,536
1912-13	5,44,96,905	3,799	5,44,32,765	6,90,599	5,37,42,166	14,29,607	5,51,71,773	15,69,309	4,96,64,843	4,74,00,118	22,53,279	11,446	4,96,64,843

7. There were 3,434 complaints against assessments made from 1st April and 365 complaints against assessments made during the currency of the year, making a total of 3,799 complaints against 5,737 complaints in 1911-12.

8. The following tables give the increases and decreases in property taxes levied as compared with those of 1911-12 :—

General Tax.

B.

1911-12.				1912-13.				Increase (Difference between Columns 4 and 8.)
10¼ per cent.	Compounded sum payable by Government under section 144 (3).	Compounded sum payable by Port Trustees under section 145 (3).	Total of Columns 1, 2 and 3.	10¼ per cent.	Compounded sum payable by Government under section 144 (3).	Compounded sum payable by Port Trustees under section 145 (3).	Total of Columns 5, 6 and 7.	
1	2	3	4	5	6	7	8	9
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
44,12,534 15 3	2,32,835 0 0	2,47,312 0 0	48,92,681 15 3	48,56,102 7 7	2,32,835 0 0	2,47,312 0 0	50,36,249 7 7	1,43,567 8 4

The amount of General Tax on properties exempted from its payment under Section 143 (1) (*a*) (*b*) is Rs. 2,39,410-14-8 against Rs. 2,33,160-9-5 in 1911-12.

Water Tax.

C.

1911-12.				1912-13.				Difference.			
On rateable value @ 3¾ per cent.	Compounded.	On meter measurement	Total of columns 1, 2 & 3.	On rateable value @ 3¾ per cent.	Compounded.	On meter measurement	Total of columns 5, 6 & 7.	On rateable value (Increase).	Compounded (Decrease).	On meter measurement (Increase).	Difference between columns 4 & 8 (Increase).
1	2	3	4	5	6	7	8	9	10	11	12
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
10,09,190 7 4	Rs. 14,058 11 6	Rs. 9,93,105 10 3	Rs. 20,16,354 13 1	Rs. 10,47,693 8 6	Rs. 12,256 15 3	Rs. 10,58,380 1 10	Rs. 21,18,330 9 1	Rs. 38,503 1 2	Rs. 1,801 12 4	Rs. 65,774 7 2	Rs. 1,02,475 12 0

Halalkhor Tax.

D.

1911-12.			1912-13.			Difference between columns 3 and 6 (Increase).
On rateable value at 3 per cent.	On special service.	Total of columns 1 & 2.	On rateable value at 3 per cent.	On special service.	Total of columns 4 & 5.	
1	2	3	4	5	6	7
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
11,13,935 12 3	1,92,633 5 9	13,06,569 2 0	11,54,193 9 4	2,00,599 2 0	13,54,792 11 4	48,223 9 4

9. The total demand on account of property taxes amounted to Rs. 85,09,872-12-0 (including Government and Port Trust), to which is to be added Rs. 13,301-11-4 on account of previous years, making a total of Rs. 85,23,174-7-4, from which sum Rs. 56,202-9-8 were allowed as one-fifth Drawback of the General Tax under Section 158 (2) of the Act. The total number of claims for one-fifth drawback was 7,244.

10. For these taxes 125 bills for Rs. 13,301-11-4 were issued for previous years, and for 1912-13, 73,042 bills for Rs. 79,73,523-2-4 (excluding Government and Port Trust for which no bills are issued, the amounts being paid direct into the Chief Accountant's Office), making a total of 73,167 bills for Rs. 79,86,824-13-8.

11. The outstanding balance for property taxes for all years on 31st March 1912 was Rs. 68,114-5-0. During 1912-13 bills for these taxes, amounting to Rs. 79,86,824-13-8 were issued. Government and Port Trust contributions were Rs. 4,80,147 (Rs. 2,32,835 and Rs. 2,47,312). Thus the total demand amounted to Rs. 85,35,086-2-8.

12. Of this amount Rs. 84,64,139-2-9 were collected, *i.e.*, Rs. 55,468-15-8 for former years and Rs. 84,08,670-3-1 for 1912-13, leaving uncollected the sum of Rs. 70,946-15-11. Deducting from this amount Rs. 17-15-4 written off under Standing Committee's Resolution No. 950, dated 8th May 1912, and Rs. 19,347-6-4 on account of bills recalled and cancelled, the balance outstanding on 31st March 1913 was Rs. 51,581-10-3.

13. The outstandings on 31st March 1913 were Rs. 6,581-11-0 on account of former years and Rs. 44,999-15-3 for 1912-13, making a total of Rs. 51,581-10-3.

14. *Tax on vehicles and animals.*—The demand on account of the tax on private vehicles and animals for the four quarters ended 31st December 1912 was Rs. 2,34,858-15-0 against Rs. 2,15,054-9-0 for 1911; to the first sum are to be added Rs. 2,643-12-7 outstanding on 31st March 1912 and amended demand aggregating Rs. 351-6-0 for former years, making a total of Rs. 2,37,854-1-7 for recovery. 17,853 bills were issued during 1912-13. The amount collected was Rs. 2,35,532-0-6, leaving Rs. 2,322-1-1 uncollected, of which Rs. 140-1-11 were written off under Standing Committee's Resolutions Nos. 950, dated 8th May 1912, 2755, dated 7th August 1912, 4283, dated 23rd October 1912, and 6125, dated 29th January 1913, and Rs. 246-5-0 were on bills recalled, amended bills being issued, making a total of Rs. 386-6-11 which deducted from Rs. 2,322-1-1 leaves Rs. 1,935-10-2 outstanding at the end of the year.

15. During the year there were taxed 3,923 four-wheeled vehicles, 947 two-wheeled vehicles, 888 vehicles not drawn by horses, 704 motor-cars, 94 motor cycles, 6,582 horses (including those in commission stables), 142 ponies, 974 bullocks, 1 mule, 40 donkeys and 3 buffaloes.

16. The following Table shows the total demands, collections and balances on account of property taxes and tax on private vehicles and animals :—

E.

Year.	Opening Outstanding Balance.	Demand assessed for the year and for former years.	Total.	Bills written off under Standing Committee's Resolutions and Bills recalled for amendments.	Collections.	Outstanding Balance on 31st March 1913.
1	2	4	5	6	7	8
1912-13.	Rs. a. p. 70,758 1 7	Rs. a. p. 87,09,183 2 8	Rs. a. p. 87,79,940 4 3	Rs. a. p. 19,701 13 7	Rs. a. p. 86,99,671 3 8	Rs. a. p. 53,617 4 5

17. The miscellaneous receipts for Notices, Warrants, Battaki Fees and other small items amounted to Rs. 5,635-15-0 against Rs. 5,841-3-8 in 1911-12. The receipts for Meter Hire were Rs. 30,828-9-9 against Rs. 30,074-15-7 in 1911-12.

18. Certificates of refund of taxes for 1912-13 and for former years were issued as under :—

	Rs.	a.	p.
General Tax ...	35,318	2	0
Water Tax ...	9,056	4	5
Halalkhor Tax	13,903	2	0
Wheel Tax ...	62	0	0
Meter Hire ...	11	7	1
Notice Fees ...	10	0	0
Total Rs.	58,360	15	6

19. There were 3 appeals to the Chief Judge of the Small Causes Court, of which two were settled out of Court and withdrawn by the appellants and one was dismissed with cost.

20. The right of collecting the Toll at the Mahim and Sion Causeways was sold in 1912-13 for Rs. 22,000 (from 1st August 1912 to 31st July 1913) againt Rs. 21,050 in 1911-12. The total income in 1912-13 under this head was Rs. 21,783-5-4 against Rs. 21,100 in 1911-12.

B. D. BANAJI,
Assessor and Collector.

No. 1731 OF 1913-1914.

BOMBAY MUNICIPALITY, 23*rd June* 1913.

FROM

R. N. COYAJEE, ESQ.,

REVENUE AND REFUND AUDIT OFFICER,

TO

P. R. CADELL, ESQ., C.I.E., I.C.S.,

MUNICIPAL COMMISSIONER FOR THE CITY OF BOMBAY.

SIR,

I have the honour to submit the Annual Administration Report of the Revenue and Refund Audit Department for the official year 1912-1913. The appointment of Revenue and Refund Audit Officer was held throughout the year by Mr. S. B. Master.

I.—REVENUE AUDIT.

1.—ASSESSOR AND COLLECTOR'S DEPARTMENT.

(*a*) *Ward Offices.*

2. The balances and books of the 80 Ward clerks in the seven Wards of the City were duly examined at the end of each quarter. The amount of audit work done on each of these occasions is shown in detail in Appendix **A**.

3. 25,656 outstanding bills for Rs. 23,07,241-15-4 were duly checked in detail with the Ward Office Bill Books, Form 16 (every entry in which was subjected to scrutiny), and in totals which last were tested with the book kept under para. 9 at page 155 of the Manual which book is practically the Ward clerk's ledger. They were also checked with the Head Office Accounts (Forms 8 and 9) both in details and in totals.

(*b*) *Head Office.*

4. The Assessment Book in both its parts, one for the general tax and the other for the water and halalkhor taxes, was duly examined, and the exemptions from the payment of the general tax, the water tax and the halalkhor tax were duly checked with a view to ascertain that no property liable to pay any or all of these taxes had escaped assessment.

5. The vehicle and Animal Tax Book, kept under Section 186 of the Act, was also examined, and all the entries therein checked with the quarterly returns of the Ward Superintendents and, where necessary, also with the owner's returns under Section 187, and with the charges made for the preceding quarters. Appendix **B** gives the details for each Ward.

6. As the year recognized by Bombay Act VI of 1863 is the calendar year, the revenue from the tax on Public Land Conveyances licensed by the Commissioner of Police under that Act was audited for the twelve months from 1st January to 31st December 1912, except that the revenue from the tax on motor cars (Taxi cabs) plying for hire was audited for the twelve months from 1st April 1912 to 31st March 1913 as the permits in respect of them were issued by the Commissioner of Police for the official year under the motor vechicles rules. The certificates of issue of licenses supplied by the Commissioner of Police have been duly checked with the Register kept by the Chief Accountant. The following table shows the work done :—

Description of Public Land Conveyances.	Number of certificates or vouchers.	Amount of Revenue including Fees for Licenses, Badges, &c.
		Rs. a. p.
Victorias	4,715	1,14,113 7 0
Riding Hackeries	130	1,652 2 0
Labour Carts	11,784	1,46,268 12 0
Hand Carts	26	163 0 0
Single Bullock Carts	3	39 0 0
Motor Cars (Taxi Cabs)	140	6,462 0 0
Total ...	16,798	2,68,698 5 0

7. The right of collecting the toll, leviable under Section 190 of the Act, on vehicles entering the city from Salsette, is farmed every year for twelve months on the 1st of August, and in pursuance of the conditions of the sale of such right the toll farmer concerned during the year of report supplied a monthly statement of the number of vehicles on which the toll was levied. The statement was checked with the counterfoils of ticket books and with the toll register, kept by the toll farmer in the prescribed form at the respective chowkies on the Sion and Mahim Causeways. Owing to the change in the Contractor, it was not possible to arrange for the audit of the accounts for the month of July during which Rs. 372-12-0 was the toll levied on 2,982 carts at Sion and Rs. 416 on 3,328 carts at Mahim. The work done is shown in the following table :—

Month.	At Sion.		At Mahim.		Total.	
	No. of Carts.	Amount.	No. of Carts.	Amount.	No. of Carts.	Amount.
		Rs a. p.		Rs. a. p.		Rs. a. p.
March 1912	7,554	944 4 0	10,368	1,296 0 0	17,922	2,240 4 0
April ,, ...	7,512	939 0 0	10,614	1,326 12 0	18,126	2,265 12 0
May ,, ...	8,160	1,020 0 0	11,844	1,480 8 0	20,004	2,500 8 0
June ,, ...	4,896	612 0 0	6,990	873 12 0	11,886	1,485 12 0
August ,, ...	10,133	1,267 4 0	5,334	666 12 0	15,472	1,934 0 0
September ,, ...	14,008	1,751 0 0	6,420	802 8 0	20,428	2,553 8 0
October ,, ...	11,201	1,400 2 0	6,928	866 0 0	18,129	2,266 2 0
November ,, ...	5,627	703 6 0	7,370	921 4 0	12,997	1,624 10 0
December ,, ...	7,026	878 4 0	8,070	1,008 12 0	15,096	1,887 0 0
January 1913	8,600	1,075 0 0	8,483	1,060 6 0	17,083	2,135 6 0
February ,, ...	7,364	908 0 0	8,663	1,082 14 0	15,927	1,990 14 0
Total ...	91,986	11,498 4 0	91,084	11,385 8 0	1,83,070	22,883 12 0

8. Appendix **C** shows the number of claims to one-fifth drawback under Section 158 (2) of the Act, which were scrutinized by this office during 1912-1913.

9. All the alterations in the rateable value and in demand made through the increase and decrease forms were duly checked with the Tabulated Ward Reports (Form 13), which contained your orders as to such alterations and with your separate sanctions recorded in the Audit Note Book kept in this office.

10. The number of complaints against valuations under Section 163 of the Act that were heard was 102, A Ward, Fort and Colaba ; 517, C Ward, Bhuleshwar ; and 149, D Ward, Girgaum. The total number of decisions on complaints against amendments under Section 167 of the Act, which were scrutinized by this office, amounted to 352 from all the seven Wards of the City.

11. Twenty-one irrecoverable bills for Rs. 169-11-3, as per details given in the subjoined table, were scrutinized and submitted to you in the prescribed form for action, under Section 216 of the Act.

Ward.	Number of Bills.	Amount.			
		Property taxes.	Wheel tax.	Process fee.	Total.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A	11	8 11 6	87 0 0	0 4 0	95 15 6
B	3	.....	28 8 8	.....	28 8 8
C	3	.....	22 9 3	.....	22 9 3
E	1	.....	9 0 0	.....	9 0 0
G	3	9 3 10	4 0 0	0 6 0	13 9 10
Total ...	21	17 15 4	151 1 11	0 10 0	169 11 3

The Standing Committee sanctioned these being written off in their Resolutions Nos. 950, 2755, 4283 and 6125, dated 8th May 1912, 7th August 1912, 23rd October 1912, and 29th January 1913, respectively.

12. The demands, collections and balances at the close of the year, as duly audited in the manner contemplated by the Manual, are summarized below :—

——	General tax.	Water tax.	Halalkhor tax.	Vehicle and Animal tax.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
I.—Total demands including Rs. 4,89,147-0-0 paid by Government and Port Trust in lieu of the General tax...	53,67,906 9 10	22,32,345 6 3	14,33,509 15 10	2,42,064 15 7	91,75,726 15 6
II.—Deduct bills recalled which were either cancelled or in lieu of which amended bills were issued.	2,63,220 12 7	92,383 5 4	62,369 1 8	4,446 3 0	4,22,369 6 7
III.—Net demand for collection ...	50,04,685 13 3	21,39,912 0 11	13,71,140 14 2	2,37,618 12 7	87,53,357 8 11
IV.—(*a*) Collection paid into the Treasury, including departmental adjustments ...	49,87,982 4 2	21,11,025 4 4	13,65,131 10 3	2,35,532 0 6	86,99,671 3 3
(*b*) Irrecoverable bills written off	6 10 10	8 11 6	2 9 0	151 1 11	169 1 3
(*c*) Balance at the close of the year ...	16,696 14 3	28,878 1 1	6,006 10 11	1,935 10 2	53,517 4 5
Total of IV ...	50,04,685 13 3	21,39,912 0 11	13,71,140 14 2	2,37,618 12 7	87,53,357 8 11

13. The collections were checked with the totals in the Chief Accountant's books under each head and the balance by an examination of the bills actually on hand in the seven Ward offices on 1st April 1913. They were found to be correct.

Engineer's Department.

14. The revenue books kept in the General, Streets and Buildings, Water Works and Drainage Branches of the Executive Engineer's Office were duly checked each month with the permits, receipts, vouchers and other papers supporting the several entries therein, the object of audit being to see that the charges were correctly calculated at rates duly sanctioned and that the collections as shown by the various books were all paid into the Municipal Treasury. The number of vouchers examined was 9,529, representing Rs. 3,66,263-11-8.

Health Department.

15. The revenue books kept in the Health Office, as well as those kept in the seven Deputy Health Officers' Offices for the Wards A to G, were duly checked each month with the receipts, vouchers and other papers supporting the entries therein, the object of audit being to ascertain that the amounts collected as shown by the various books were at the rates fixed under proper authority, and that they were all duly paid into the Municipal Treasury. The number of vouchers examined was 24,213, representing Rs. 99,841-15-10.

Vaccination Department.

16. The revenue books kept in the office of the Superintendent of Vaccination were duly checked each month in accordance with the instructions conveyed in your No. 15378 of 26th August 1910 with the receipts and vouchers and other available papers supporting the several entries therein, the object of audit being to see that the charges were correctly calculated at rates duly sanctioned, and that the collections as shown by the various books were all paid into the Municipal Treasury. The number of vouchers examined was 1,209, representing Rs. 5,780-4-0.

Licensing Department.

17. The number of licenses for 1912-13, the issue of which was sanctioned by the Commissioner under Sections 394 and 393 of the Act, for the several purposes mentioned in Schedule M was 8,015 and brought in a revenue of Rs. 1,08,105. Each of these cases passed through this office and was duly scrutinized. The Register of the Superintendent of Licenses and the counterfoils of the License books were also checked with the Audit Note Books kept in this office in accordance with the Commissioner's No. 3176 of 20th May 1890 and with the counterfoils of the receipts signed by the Chief Accountant's Cashier for the purpose of seeing that the full amount of fee leviable in each case was collected and duly paid into the Municipal Treasury.

The number of permits issued under Section 390 of the Act in respect of newly established factories and the number of renewals of such permits in the year under report were 100 and 306 respectively and brought in a revenue of Rs. 2,500 and Rs. 306 respectively. Each of these permits and renewals passed through this Office and was duly checked with the register kept by the Superintendent of Licenses, with the audit note book kept in this Office, and with the counterfoils of receipts signed by the Chief Accountant's Cashier.

Markets and Slaughter Houses.

18. The register and account books kept for the different markets and Bandra Slaughter Houses were duly checked with the counterfoils of receipts issued to stall holders, &c., and with the other vouchers available. The total number of vouchers examined was 8,518, representing Rs. 5,81,035-5-2, which amount appeared duly paid into the Municipal Treasury.

Victoria Gardens.

19. The revenue books kept in the office of the Superintendent of Gardens were duly checked with the counterfoils of receipts issued for the sale of garden produce as well as with the counterfoils of tickets issued for the Elephant and Camel rides in the Victoria Gardens and for admission to the Gardens on Band days, such tickets having been brought into use from 12th October 1910. The number of vouchers examined was 45,462, representing Rs. 11,530-6-2, which amount appeared duly paid into the Municipal Treasury.

Rent bills against the Telephone and Tramway Companies.

20. The audit in connection with these bills, which used formerly to be done by the Chief Accountant, has been done in this office since the year 1906-07.

The bill against the Bombay Telephone Company that was checked by this Office in the year of report was for the calendar year 1910 and the two half yearly bills against the Tramway Company that were checked were for the period from the 2nd of February 1912 to the 1st August 1912 and from 2nd of August 1912 to the 1st of February 1913, such being the periods for which these bills are issued every year.

General.

21. As the monthly and quarterly audit of the several Departments proceeded, the errors, irregularities or omissions, which were discovered in the course of it, were brought to the notice of the Heads of the Departments concerned by means of official communications addressed to them through the Commissioner.

II.—REFUND AUDIT.

1.—Assessment Department.

22. The subjoined table shows the number and amount of claims to refund on account of vacancies under Sections 174 to 179 of the Act and on account of over collections which were scrutinized and sanctioned by this office in the year under report :—

Ward.	No. of Claims.	Amount of Refund sanctioned. Rs. a. p.
A.—Fort and Colaba	383	10,886 3 7
B.—Mandvi	144	3,380 3 7
C.—Bhuleshwar	271	5,037 11 3
D.—Girgaum	314	11,734 7 1
E.—Byculla	212	4,337 11 6
F.—Parel	103	2,444 11 9
G.—Mahim	122	6,898 8 10
Properties owned by the City Improvement Trust	445	13,668 5 11
Total ...	1,994	58,387 15 6

23. The sum of Rs. 58,387-15-6 shown in the above table was sanctioned under the following Heads of Revenue :—

Heads of Revenue.	Amount.
	Rs. a. p.
General Tax	35,318 2 0
Water Tax	9,083 4 5
Halalkhor Tax	13,903 2 0
Vehicle and Animal Tax	62 0 0
Meter Hire	11 7 1
Process Fees	10 0 0
Total ...	58,387 15 6

Town Duty Refunds.

24. As the Port Trustees and the two Railway Companies send in no Administration Reports of the Town Dues collected by them on behalf of the Municipality, it is usual for this office to submit the two statements, Appendices **D** and **E**, compiled, in so far as the gross collections are concerned, from figures supplied by the Chief Accountant. The following table compares the total results for the year under report with those for the previous year :—

Year.	Gross Revenue.	Total Refunds.	Net Revenue.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1911-1912	31,48,247 10 8	17,95,040 11 0	13,53,206 15 8
1912-1913	38,47,929 1 4	21,16,035 11 0	17,31,893 6 4

25. There was no change in the rates of duty from those in force in the previous year.

26. The total net revenue for the year of report was Rs. 17,31,893, the largest ever realised. It exhibits the very large increase of Rs. 3,78,686 over the previous year. An increase so large as this was certainly not expected and may be regarded as abnormal. It is resolvable into two component portions, first, what might be due to the checking of improper refunds through the instrumentality of the new staff retained expressly with that object, and secondly, what might be due to abnormal accumulation of stocks at the end of the year in consequence of heavy influx of goods in the latter months of the year, all such excess of stocks being almost certain to be swept off by re-exports in the following year (the current year), thereby depleting the revenue of that year. In endeavouring to determine the relative proportions of these components, therefore, it is necessary not merely to take note of the figures for the year of report but also of the preceding year and of the probable depletion in the succeeding year. Now it happens that of the conditions here presented an exact analogue is furnished by the year 1904-1905. There, as here, a Supervisory Municipal Staff was engaged, the revenue

showed an unprecedented increase, part of which was due to the labours of the staff and part to abnormal imports occasioning excessive balances, largely wiped off in the following year. The net revenues of the three years 1903-04, 1904-05 and 1905-06 compared as under :—

Year.		Net Revenue.	Increase over previous year.	Decrease from previous year.
1903-1904	... ... Rs.	10,87,123	.....	.....
1904-1905	... ... „	15,06,780	Rs. 4,19,657	.....
1905-1906	... ... „	11,66,251	.....	Rs. 3,40,529

The two years 1911-12 and 1912-13 (the year of report) exhibit the following results :—

Year.		Net Revenue.	Increase over previous year.
1911-1912	... ... Rs.	13,53,206	....
1912-1913	... ... „	17,31,893	Rs. 3,78,686

A heavy falling off is thus certain to occur in the current year, 1913-14, and indeed has set in since the commencement of the year, which however need not cause any apprehension, since, by the analogy of the previous occasion, the revenue for 1913-14 has the probability before it of turning out to be something like 3 lacs less than that of the year of report, that is to say, of standing at about Rs. 14,31,000, which taken with the year of report, would give an average for the two years of Rs. 15,81,446 per annum. This is a very substantial advance over the average of the two years preceding these as shown below :—

Anticipated average of the net revenues of 1912-13 and 1913-14.—Rs. 15,81,446

Deduct.—

Actual average of those of 1910-11 and 1911-12 ... ... „ 14,72,687

Average increase per annum ... ... „ 1,08,759

This increase represents the gain accruing through the exertions of the special staff and signifies a *permanent* expansion of revenue (exactly like the increase that resulted from the average revenue of the years 1904-05 and 1905-06, which has, by the lapse of time, proved its permanency) and can, hence, be regarded as very satisfactory and as justifying the retention of the staff.

27. Coming to the variations in net revenue under the heads of the different articles, all the articles except sugar exhibit unimportant variations of a few thousands in each case, while sugar, which usually is the one article which presents to view tremendous oscillations, has this time shown the heavy increase of Rs. 4,71,023, such as has never before been witnessed in the past. The behaviour of the net revenue from this article is generally reflected in the behaviour of the aggregate net revenue from all articles, hence, all the remarks made above as to that aggregate apply almost without exception to this specific revenue also.

28. At the commencement of the year under report the scheme that had previously been decided upon by the Corporation and supported by special rules in that behalf, *viz.*, the scheme of departmentally stamping Municipal marks upon all packages of sugar imported into the City, in view to securing more perfect identification than by means of merchants' marks of the packages when re-exported and thereby, on the one hand, facilitating the obtaining of refunds of the town duty paid on import and, on the other, preventing the perpetration of many species of frauds upon the Municipality, was sought to be launched. But so strong was the opposition of trade, which rather preferred to pay a transit or non-refundable duty of two annas per cwt. (equal to from 3 to 4 annas per bag) than incur the expense of only about a pie per bag in the special handling of the bags for purposes of Municipal stamping, that it was thought advisable to suspend the introduction of the scheme as a compulsory measure and to leave it to the option of merchants to avail themselves of it whenever they themselves chose to do so. Even as such an optional measure it succeeded in attracting 35 applications for stamping during the year and the number of bags so stamped was 30,199. In the current year assurance has already been received from one firm alone that when the Java Sugar season opens in August the firm would requisition Municipal stamping to be done on somewhere between 10,000 and 20,000 bags, to be followed by constant orders throughout the year if the experiment of stamping a large number of bags at one time proved as satisfactory to the firm as the execution of their previous smaller orders has, and which has thoroughly convinced the firm of the great advantages that Municipal marking confers upon trade.

29. The number of refund claims dealt with during the year was 60,359 against 50,906 in the previous year. The following figures for the past 10 years show how within the last three years the claims have been steadily increasing in numbers:—

1903-04	41,247
1904-05	40,656
1905-06	47,823
1906-07	44,179
1907-08	46,308
1908-09	45,783
1909-10	48,254
1910-11	55,161
1911-12	50,906
1912-13	60,359
1913-14 (from 1st April to 21st June)	17,036
Probable number for the whole year ... ...Over...	70,000

This increase contains within it the promise of establishing itself as a permanent one, since, from the figures of collections and refunds for the last three years given in the statement Appendix F (more years would prove misleading, since the rates of town duties were different in those years) the transit trade shows the tendency of continuous expansion, by virtue of which, as the collections increase, so also do the refunds. The net revenue, depending as it does upon the consumption by the local population, should normally vary only with that population, and since the latter grows only by slow degrees, the large *permanent* increases that are caused in the net revenue, such as have been discussed in para. 26 above, is always a clear indication of the prevention of *improper refunds* through the agency of the staff specially employed for the purpose from time to time. Appendix F shows that, notwithstanding such check over refunds, there has been a genuine increase in them to meet the growing demands of the transit trade above alluded to and that the greater part of this increase is in the exports by *sea*, particularly of grain, flour, sugar and wines and the tendency is towards a still further expansion as time goes on, as is evidenced by the further rise in the number of claims in the current year. All such increase argues a re-inforcement of the supervisory staff at the Railways and the Docks and Bunders and more especially at the Docks and Bunders. The greater part of such re-inforcement at the latter places was effected by the provision in the budget for the current year for the transference of 4 of the Marking Inspectors to the Export Inspection side, when Municipal marking as a compulsory measure was held in abeyance.

Conclusion.

30. In addition to the above the office had to deal with correspondence of all departments affecting revenue which pass through this office, and with the questions of principle relating to revenue, the importance of which can scarcely be judged by the number of inward and outward references which were respectively 11,204 and 8,437 in the year under report.

I have the honour to be,

Sir,

Your most obedient servant,

R. N. COYAJEE,

Revenue and Refund Audit Officer.

Appendix A.

STATEMENT of Balances examined quarterly during 1912-1913.

Number of Ward Clerks.	WARD.	Balances examined on 1st April 1912.		Balances examined on 1st July 1912.		Balances examined on 1st October 1912.		Balances examined on 3rd January 1913.		Total Balances examined during the year.	
		Number of Bills.	Amount.	Number of Bills.	Amount.	Number of Bills.	Amount.	Number of Bills.	Amount.	Number of Bills.	Amount.
			Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
16	A—Fort and Colaba	694	41,213 10 6	3,341	4,04,976 3 4	786	53,120 5 1	3,091	4,30,825 6 8	7,912	9,29,635 9 7
11	B—Mandvi	137	6,652 1 5	2,064	2,65,642 11 3	122	9,661 6 7	2,767	3,41,041 1 11	5,090	6,22,997 5 2
14	C—Bhuleshwar	63	6,887 7 3	1,290	1,15,465 5 9	64	5,328 12 7	1,651	1,51,247 15 6	3,068	2,78,779 9 1
11	D—Girgaum	83	6,284 5 6	1,017	91,904 9 1	110	5,039 13 4	1,026	88,175 9 10	2,236	1,91,554 5 9
13	E—Byculla	155	6,413 3 6	1,097	83,906 4 5	165	7,043 6 1	1,288	1,00,544 14 11	2,705	1,97,907 12 11
7	F—Parel	71	1,297 9 7	743	20,609 2 6	75	1,075 11 3	647	22,547 8 6	1,536	45,529 15 10
8	G—Mahim	110	2,109 11 10	1,454	19,703 11 3	131	1,977 0 3	1,424	17,246 15 8	3,109	41,037 5 0
80	Total ...	1,313	70,758 1 7	11,006	10,02,207 15 7	1,443	83,146 7 2	11,894	11,51,129 7 0	25,656	23,07,241 15 4

Appendix B.

STATEMENT of entries in the Vehicle and Animal Tax Book checked during 1912-13.

Ward.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
A	972	1,118	1,190	1,341	4,621
B	611	644	684	718	2,657
C	855	939	993	1,060	3,847
D	1,230	1,374	1,463	1,591	5,658
E	699	777	825	924	3,225
F	270	323	344	372	1,309
G	257	274	289	312	1,132
Total ...	4,894	5,449	5,788	6,318	22,449

Appendix C.

STATEMENT of claims for 1/5 Drawback scrutinized during 1912-13.

Ward.	1st half of 1912-13.		2nd half of 1912-13.		Total.	
	No. of claims received.	No. of claims admitted.	No. of claims received.	No. of claims admitted.	No. of claims received.	No. of claims admitted.
A	337	180	308	171	645	351
B	449	164	431	185	880	349
C	730	278	695	312	1,425	590
D	481	176	428	203	909	379
E	924	528	999	555	1,923	1,083
F	261	154	301	185	562	339
G	464	243	436	231	900	474
Total ...	3,646	1,723	3,598	1,842	7,244	3,565

Appendix D.

STATEMENT contrasting the Collections, Refunds and Net Revenue from Town Duties for the years 1911-12 and 1912-13.

NAME OF ARTICLE.	COLLECTIONS.						REFUNDS.								NET REVENUE.			
	1911-12.		1912-13.		Increase in 1912-13.	Decrease in 1912-13.	1911-12.			1912-13.			Increase in 1912-13.	Decrease in 1912-13.	1911-12.	1912-13.	Increase in 1912-13.	Decrease in 1912-13.
							On account of Exports.	On Account of articles supplied to Government.	Total.	On account of Exports.	On account of articles supplied to Government.	Total.						
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Grain at annas 4 per Candy	....		....				207 12 0			19 0 0								
Do. do. 6 do.	5,66,014 7 4		10,55,189 2 8				5,20,685 12 0			5,38,169 14 0								
Total		5,66,014 7 4		10,55,189 2 8	87,174 11 4	....		1,20,873 8 0	....	5,20,873 8 0		5,38,169 14 0	....	6,28,310 14 0	1,07,245 8 0	....		
Flour at annas 2 per Candy	....		....				....			....								
Do. do. 4½ do.	1,017 14 0		1,824 2 0		806 8 0	....	33,615 8 0			35,606 1 0								
Total		1,017 14 0		1,824 2 0	806 8 0	....		33,615 8 0	....	33,615 8 0		35,606 1 0	....	33,106 1 0	1,990 12 0	....		
Sugar, at annas 6 per Cwt.		17,83,718 12 1		19,59,280 12 2	6,76,524 15 1	....		11,72,668 1 0	....	11,72,668 1 0		13,30,527 1 0	....	13,58,527 1 0	2,29,861 0 0	....	1,46,829 12 1	6,29,913 11 1	4,71,039 15 1	....
Wines and Spirits at annas 4 per Imperial Gallon		2,47,953 4 1		2,63,892 8 10	15,939 4 9	....		27,620 13 0	....	27,620 13 0		34,127 8 0	...	34,127 8 0	6,506 9 0	....	2,20,332 8 1	2,29,764 0 10	9,431 11 9	....
Beer at 8 pies per Imperial Gallon ..		39,220 12 3		36,504 13 5	....	2,715 12 10		27,402 11 0	....	27,402 11 0		26,987 5 0	....	26,987 5 0	....	1,415 6 0	11,818 1 3	10,217 10 5	....	1,600 6 10
Ghee at annas 10 per Bombay Maund ..		2,80,479 5 6		2,58,910 12 9	23,568 9 1	....		20,879 13 0	....	20,879 13 0		20,333 10 0	....	20,333 10 0	....	546 3 0	2,59,599 8 6	2,37,577 2 9	....	21,722 5 9
Timber at 7½ per cent. on Market Value..		2,26,640 15 10		2,03,998 1 3	22,691 14 8	....		31,323 8 0	....	31,323 8 0		18,885 4 0	....	12,563 4 0	1,842 15 0	....	1,95,317 7 10	1,91,434 13 3	....	3,882 14 7
Firewood at annas 2 per Candy		72,056 1 10		70,337 10 8	1,718 7 2	....		....	....	....		....	....	....	....	....	72,056 1 10	70,337 10 8	....	1,718 7 2
					7,30,396 2 5 80,304 11 8	80,304 11 8									2,72,226 8 0 1,061 3 0	1,061 3 9			4,58,107 10 10 1,61,271 4 2	1,03,271 4 2
Total Rs. ..		31,49,347 10 3		33,47,929 1 4	6,99,581 6 8			17,93,047 11 0		17,93,040 11 0		21,16,003 11 0		21,16,018 11 0	3,23,964 0 0		13,56,300 14 6	17,61,893 6 4	2,79,593 5 9	

Appendix E.

STATEMENT contrasting the Imports, Exports and Balance of the several articles subject to Town Duty during the year 1912-13 with those for 1911-12.

NAME OF ARTICLE.	IMPORTS.						EXPORTS AND SUPPLY TO GOVERNMENT BY CONTRACTORS.										BALANCE (LOCAL CONSUMPTION AND STOCK).			
	1911-12.		1912-13.		Increase in 1912-13.	Decrease in 1912-13.	1911-12.				1912-13.				Increase in 1912-13.	Decrease in 1912-13.	1911-12.	1912-13.	Increase in 1912-13.	Decrease in 1912-13.
							Exports.		Supply to Government.	Total.	Exports.		Supply to Government.	Total.						
Grain at annas 4 per Candy—Candies ..	.....		.....				1,151				76									
Do. do. 8 do. do. ..	26,34,704		26,13,837				13,88,495				16,75,199									
Total Candies ..		26,34,704		26,13,837	1,79,133	.....		13,89,046	.....	12,89,646		16,75,275	.....	16,75,275	3,85,629	.....				
Flour at annas 3 per Candy—Candies ..	.....		.....				.....				.....						10,00,538	9,77,733	.....	1,12,720
Do. do. 4½ do. do. ..	3,620		5,881				1,19,321				1,26,458									
Total Candies ..		3,620		5,881	2,261	.....		1,19,321	.....	1,19,321		1,26,458	.....	1,26,458	6,927	.....				
Sugar at annas 8 per Cwt. .. .. Cwts.		29,65,811		29,18,761	13,53,250	.....		22,65,882	.....	22,65,882		26,77,084	.....	26,77,084	4,11,202	.....	2,99,929	15,41,707	9,42,068	.....
Wines and Spirits at annas 4 per Imperial Gallon.. .. ..Gallons.		8,91,813		10,54,014	62,201	.....		1,10,484	.....	1,10,484		1,26,550	.....	1,26,550	26,066	.....	8,81,329	9,17,464	36,135	.....
Beer at 8 pies per Imperial Gallon. Gallons.		12,58,264		11,71,259	.....	86,905		8,89,088	.....	8,89,088		8,44,394	.....	8,44,394	.....	45,702	3,88,578	3,26,965	.....	41,613
Ghee at annas 10 per Bombay Maund. Maunds.		4,64,767		4,12,137	.....	51,630		33,408	.....	33,408		32,534	.....	32,534	.....	874	4,31,359	3,80,603	.....	50,756
Timber at 2½ per cent. on Market Value. Value Rupees.		90,66,000		81,22,222	.....	9,43,677		12,48,892	.....	12,48,892		13,14,610	.....	13,14,610	65,718	.....	78,17,108	69,07,712	.....	10,09,396
Firewood at annas 2 per Candy—Candies.		5,76,447		5,62,631	.....	13,819		.....	.....	.....		.....	.....	.....	.....	.....	5,76,440	5,62,631	.....	13,819

Appendix F.

			Exports by G. I. P. Ry.	Exports by B. B. & C. I. Ry.	Exports by Sea.	Total.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Grain	1910-11	Collections...	2,91,377 11 6	2,06,448 14 0	3,24,934 15 2	8,22,756 8 8
		Refunds ...	14,829 14 0	41,890 9 0	3,22,551 2 0	379,271 9 0
	1911-12	Collections...	5,83,114 5 0	1,75,656 7 0	2,29,243 14 4	9,88,014 10 4
		Refunds ...	2,902 10 0	48,129 1 0	469,941 14 0	520,973 9 0
	1912-13	Collections...	6,34,280 14 3	2,44,529 7 0	1,76,378 13 5	10,55,189 2 8
		Refunds ...	2,929 7 0	16,293 14 0	6,08,995 9 0	628,218 14 0
Flour	1910-11	Collections...	181 13 0	728 15 0	48 12 0	954 8 0
		Refunds ...	5,839 14 0	329 1 0	20,808 14 0	28,977 13 0
	1911-12	Collections...	37 3 0	979 7 0	1 10 9	1,018 4 9
		Refunds ...	5,803 13 0	596 0 0	27,215 8 0	33,615 5 0
	1912-13	Collections...	63 3 0	1,587 2 0	3 12 0	1,654 2 0
		Refunds ...	6,786 2 0	669 12 0	28,130 3 0	35,586 1 0
Sugar	1910-11	Collections...	36,761 9 0	608 7 0	17,51,652 8 8	17,89,022 8 8
		Refunds ...	5,96,522 15 0	4,34,771 12 0	3,10,890 6 0	13,42,185 1 0
	1911-12	Collections...	39,494 6 0	632 1 0	12,42,629 9 1	12,82,756 0 1
		Refunds ...	4,64,526 0 0	3,89,464 12 0	2,78,935 5 0	11,32,926 1 0
	1912-13	Collections...	47,701 9 0	4,618 11 0	19,07,055 8 2	19,59,380 12 2
		Refunds ...	5,37,468 4 0	4,56,663 1 0	3,44,995 12 0	13,38,527 1 0
Wines and Spirits	1910-11	Collections...	468 10 6	78 10 0	2,61,006 8 6	2,61,553 13 0
		Refunds ...	14,379 2 0	6,933 9 0	1,925 13 0	23,238 8 0
	1911-12	Collections...	598 4 0	67 14 0	2,47,287 8 1	2,47,953 10 1
		Refunds ...	16,541 5 0	9,047 9 0	2,032 1 0	27,620 15 0
	1912-13	Collections...	237 10 0	22 8 0	2,63,243 6 10	2,63,503 8 10
		Refunds ...	18,429 11 0	11,971 12 0	3,736 1 0	34,137 8 0
Beer	1910-11	Collections...	100 3 0	2 0 0	37,084 9 0	37,186 12 0
		Refunds ...	21,143 12 0	4,381 5 0	397 12 0	25,892 13 0
	1911-12	Collections...	394 11 0	5 7 0	38,920 10 5	39,320 12 5
		Refunds ...	20,422 14 0	6,725 9 0	654 4 0	27,802 11 0
	1912-13	Collections...	402 15 0	2 10 0	36,199 6 5	36,604 15 5
		Refunds ...	18,736 15 0	7,241 9 0	378 13 0	26,387 5 0
Ghee	1910-11	Collections...	74,633 15 3	85,521 12 6	1,21,815 14 5	2,81,971 5 2
		Refunds ...	5,463 10 0	1,182 4 0	20,637 10 0	27,283 8 0
	1911-12	Collections...	86,077 4 9	71,320 14 6	1,33,081 9 3	2,90,479 12 6
		Refunds ...	2,174 13 0	805 6 0	17,899 10 0	20,879 13 0
	1912-13	Collections...	90,990 9 6	66,144 2 0	1,01,076 1 0	2,58,210 12 6
		Refunds ...	4,200 8 0	1,766 12 0	14,366 6 0	20,333 10 0
Timber	1910-11	Collections...	798 13 0	129 8 0	1,84,923 6 5	1,85,851 11 5
		Refunds ...	12,490 7 0	15,773 12 0	4,262 10 0	32,526 13 0
	1911-12	Collections...	864 3 0	159 8 0	2,25,626 4 10	2,26,649 15 10
		Refunds ...	13,595 10 0	10,232 8 0	7,394 3 0	31,222 5 0
	1912-13	Collections...	2,305 2 0	438 12 0	2,00,314 3 2	2,03,058 1 2
		Refunds ...	9,404 3 0	15,352 11 0	8,108 6 0	32,865 4 0

PUBLIC WORKS.

A.—Introductory Remarks ..... Pages 154
B.—New Works, General ..... „ 155 to 163
C.—Drainage Loan Works ..... „ 164 to 167
D.—Drainage Ordinary Works ..... „ 168 to 171
E.—Regulations of Streets and Buildings ..... „ 172 to 175
F.—Roads, Footpaths, &c. ..... „ 176 to 180
G.—Public Lighting ..... „ 181
H.—Workshops, Inspection Motor Cars and Pumping, Compressor and Ejector Stations ..... „ 182 to 188
I.—General—Important Subjects, Bills, Notices and Correspondence, Summary of Clerical Work, Plague Operations, and Municipal Servants' Act ..... „ 189 to 194
J.—Water Works (including the work done by the Special Officer and his staff) ..... „ 195 to 205
K.—Fire Brigade ..... „ 207 to 213
L.—Gardens ..... „ 215 to 223
M.—Victoria and Albert Museum ..... „ 225 to 227

Note.—The report on Public Works—**A** to **I**—is by James W. Mackison, Esq., B.Sc., M. Inst. C.E., Executive Engineer, Municipality, forwarded with his letter No. G-3413, dated the 29th May 1913.

The report on Water Works—**J**—is by H. J. Trivess Smith, Esq., A.M.I.C.E., M.I.M.E., Hydraulic Engineer, forwarded with his letter No. W 4216, dated the 10th June 1913.

The report on Fire Brigade—**K**—is by T. C. Greenop, Esq., Chief Officer of the Fire Brigade, forwarded with his letter No. 487, dated the 15th May 1913.

The report on Gardens—**L**—is by C. D. Mahalaxmiwalla, Esq., Superintendent of Municipal Gardens, forwarded with his letter No. 645, dated the 28th May 1913.

The report on Victoria and Albert Museum—**M**—is by Cecil L. Burns, Esq., the Curator and Secretary, forwarded with his letter No. 16, dated the 8th April 1913.

No. G-3413 of 1913-14.

Executive Engineer's Office,

Bombay, *29th May* 1913.

To

The Municipal Commissioner

for the City of Bombay.

Sir,

I have the honour to forward herewith the Administration Report of the Department under my control for the year 1912-13 as requested in your No. 227, dated the 3rd April 1913.

2. The report is divided under the following heads :—

	Paras.
A.—Introductory Remarks	3 to 16
B.—New Works, &c., General	17 to 57
C.—Drainage, Loan Works	58 to 94
D.—Drainage, Ordinary Works	95 to 131
E.—Regulations of Streets and Buildings	132 to 143
F.—Roads, Footpaths, &c.	144 to 182
G.—Public Lighting	183 to 185
H.—Workshops, Inspection Motor Cars and Pumping, Compressor and Ejector Stations	186 to 245
I.—General important subjects reported upon Bills, Notices and Correspondence, Summary of Clerical Work, Plague Operations and Municipal Servants' Act	246 to 256

A.

INTRODUCTORY REMARKS.

ESTABLISHMENT.

3. The post of the Executive Engineer, Municipality, was held by me throughout the year 1912-13. I was assisted by the following Officers in conducting the duties of the different Branches of this Department :—

4. Mr. B. H. HEWETT, A.M. I. C.E., Deputy Executive Engineer, Mechanical Branch, was in charge of the Mechanical Branch and supervised the working, repairs and maintenance of the Love Grove Pumping Station, the Air Compressor Stations at Love Grove and Colaba, the Ejector Stations, the Municipal Workshops, the Electric Light Installation, &c.

5. Mr. NICHOLAS MAUGHAN, A. M. I. C.E., M. R. S. I., assisted by Messrs. DINSHA DADABHAI DARUWALA, L.C.E., A. M. I. C. E., M. R. S. I., and FRAMJI JAMSHEDJI BILIA, L.C.E., A.M. I. C.E. (Ireland), Assistant Engineers, Drainage, was in charge of the Drainage Branch.

6. Mr. DARUWALA was granted three months' privilege leave combined with three months and twenty days' furlough from 12th April to 31st October 1912 and Mr. MAUGHAN looked after Mr. DARUWALA'S duties in addition to his own.

7. Mr. G. P. CABLE held the post of 1st Engineer, Love Grove Pumping and Compressor Stations throughout the year.

8. Mr. ALICK DUNN was appointed to the new post of Assistant Engineer for Buildings and Architecture with effect from the 13th September 1912 and continued to hold that appointment up to the close of the year.

9. Mr. KAIKHUSHRU PESTONJI BHEDWAR, L.C.E., Assistant Engineer, General Branch, continued to assist me in the general supervision and conduct of the work of this Department.

10. Messrs. MUNCHERJI EDULJI JOSHI, L.C.E., ATMARAM BHASKER VAIDYA, L.C.E., NASARWANJI DINSHAW MISTRI, L.C.E., and JAYME REBEIRO, L.C.E. (Building Superintendents) assisted me in matters connected with the administration of the Building Sections of the Municipal Act and Bye-Laws.

11. Mr. MUNCHERJI EDULJI JOSHI was granted two months and eighteen days' privilege leave from the 3rd January 1913 and Mr. BURJORJI MUNCHERJI NARIMAN was appointed to act for him with effect from the 14th January 1913.

12. Mr. JAYME REBEIRO was granted four months and twenty-seven days' sick leave on half pay combined with one month and seventeen days' privilege leave from the 1st July 1912 and Mr. BURJORJI MUNCHERJI NARIMAN was appointed to act for him during that period.

13. Mr. AMRITLAL VITHALDAS THACKER, L.C.E., Road Superintendent, continued to be in charge of the Road Branch.

14. Mr. MANGALRAO RAMJI MHATRE continued to hold the post of Architectural Surveyor up to the 4th March 1913 and supervised the preparation of plans and estimates and the construction of new buildings during the year. He also assisted the Department in the execution of works carried out by the General Branch in connection with the erection of temporary Health Camps and other measures for the suppression of Plague.

15. Mr. MHATRE was granted one month's privilege leave from the 21st November 1912.

16. I regret to have to record the death of Mr. MHATRE which took place on 5th March 1913. During the time he was employed in this Department he discharged his duties with great zeal and efficiency.

B

NEW WORKS, &c.

17. Subjoined is a list of new works, each costing over Rs. 3,000.

18. They are divided into two classes as follows :—

(1) Works sanctioned, but not undertaken at the close of the year, and

(2) Works in progress at the close of the year.

LIST OF NEW WORKS, EACH COSTING OVER Rs. 3,000.

Consecutive Number.	Description of Work	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1913.	REMARKS.
	WORKS SANCTIONED, BUT NOT UNDERTAKEN AT THE END OF THE YEAR. *Buildings and Sanitary Structures.*		Rs. a. p.	Rs. a. p.	
1	Construction of stables and chals for D Ward bullocks and bigaries at Gilder Tank site.	1	2,47,375 10 7	1,27,886 0 1	The poor widows' home premises at Annesly Road have been acquired and plans and estimates for constructing stables and chawls on the site thereof are being prepared.
2	Construction of chawls for Halalkhores at Tardeo Flats.	2	86,400 0 0	1,309 15 3	A revised scheme for semi-permanent chawls is now in hand.
3	Construction of a stable for bullocks at Mahim.	3	19,136 0 0	81 9 0	Messrs. Nappu Patramal & Co.'s tender for the work having been accepted, arrangements were being made for the execution of the work at the close of the year.
4	Construction of shops on the Western and Southern sites of the Arthur Crawford Markets.	4	38,732 0 0	4,822 7 10	Revised plans and estimates are under preparation and will be submitted shortly.
5	New Market at Chaupati ...	5	75,000 0 0	63 0 0	The question of site is under consideration.
6	Extension of Dhobiwada at Mahalaxmi by 50 stones.	6	17,020 0 0	.....	Messrs. Nappu Patramal & Co.'s tender for the work included in the Budget for 1912-13 having been accepted the proposals to entrust to them also the work sanctioned in the Budget for 1913-14 were under consideration at the close of the year.
7	Construction of a small slaughter house at the DeLisle Road Sheep Market.	7	5,333 0 0	.....	Revised plans and estimates are being prepared as the Executive Health Officer has selected a new site.
8	Construction of a Parrot and Cockatoos' house in the Victoria Gardens.	8	4,183 0 0	2 6 0	Plans have been prepared and tenders will shortly be invited.

New Works, &c.—*Continued.*

Consecutive Number.	Description of Work.	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1912.	Remarks.
	WORKS SANCTIONED BUT NOT UNDERTAKEN AT THE CLOSE OF THE YEAR—*contd.*		Rs. a. p.	Rs. a. p.	
	Roads and Overbridges.				
9	Construction of a 60 feet road along Tulsi Pipe Line from DeLisle Road to Dadar Road.	...	3,38,908 0 0	.....	The land required for the construction of the road has been acquired but the execution of the work has been deferred pending further orders from the Commissioner.
	Drainage.				
10	Construction of latrines and urinals.	9	5,000 0 0	.....	The work will be taken in hand shortly.
11	Pulling down a 20-seated old pattern latrine and reconstructing a new one trough pattern in Hallalkhore Barraks in Sukhlaji Street.	10	4,452 0 0	.....	Commissioner's sanction has been applied for carrying out the work departmentally.
12	Cutting out rocky barriers in the channel at Love Grove.	28	16,914 0 0	116 6 0	The work will have ultimately to be abandoned if it is decided to do away with the Love Grove sluices. A report on the subject was received from the Consulting Engineers and was under consideration at the close of the year.
13	Constructing a storm-water drain from the junction of Connaught and Reay Roads to Kalaghauki and Supari-bag Roads.	29	8,22,000 0 0	.....	Tenders for the work were received on the 31st March 1913.
14	Laying 9″ stoneware pipe sewer in the locality known as Saitan Chowki near Khed Tank off Parbhadevi Road.	30	12,514 0 0	.....	This work has been abandoned and a new scheme has been proposed for which the Commissioner's orders are awaited.
15	Substituting ejectors of 700 gallons capacity in place of the existing ones of 250 gallons in Mazagon No. 2 District.	31	19,762 0 0	.....	Orders have been placed with Messrs. Richardson & Cruddas for the manufacture of some of the tubbing plates required and as soon as these are obtained the work will be taken in hand.
16	Laying 9″ pipe sewer at Arthur Road from Jacob Circle to the north of Milch Cattle Stables proposed to be constructed by Messrs. R. J. E. J. Dharma.	32	8,938 0 0	.....	Tenders for this work were invited and were returnable on the 10th April 1913.
17	Extending the culvert at the junction of Arthur Road and Delisle Road.	33	5,907 0 0	.....	The work will shortly be taken in hand departmentally.

New Works, &c.—*Continued.*

Consecutive Number.	Description of Work.	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1913.	Remarks.
			Rs. a. p.	Rs. a. p.	
	WORKS SANCTIONED BUT NOT UNDERTAKEN AT THE CLOSE OF THE YEAR.—*contd.*				
	Drainage.—contd.				
18	Constructing a storm-water drain with half-sized water gullies and water tables at Trinity Street.	34	5,617 0 0	.....	Commissioner's sanction to invite tenders for the work has been applied for.
19	Filling in road side drain and providing a new masonry drain with 8 water entrances and water tables at Thakurdwar Road.	35	6,356 0 0	.....	Do. do.
20	Constructing a storm-water drain with three manholes over it at Wari Bunder Cross passage and providing a half-sized water entrance with 9″ C. I. S. W. connections at Wari Bunder Road.	36	3,880 0 0	.....	The work will shortly be taken in hand departmentally.
21	Providing a covered south-west drain in portions of Charni Road and Khetwady Main Road from Khetwady Back Road to Chunam Kiln Road.	37	15,999 0 0	.....	Commissioner's sanction has been applied for to invite tenders for the work.
22	Constructing a wooden fence and brick masonry wall for the compound of the Chief Inspector's Chauki at Baboola Tank Road.	38	5,551 0 0	.....	Commissioner's sanction has been applied for for carrying out the work departmentally.
23	Permanent manholes over south-west drains.	39	3,000 0 0	.....	The work will shortly be taken in hand departmentally.
24	Constructing south-west drain in Victoria Gardens.	40	4,500 0 0	.....	The work will be taken in hand after the rains.
25	Laying a south-west pipe drain along Mahim Bazar Road.	41	5,188 0 0	.....	Commissioner's sanction has been applied for to invite tenders for the work.
26	Filling in open side drain and constructing a masonry covered drain with water gullies and water tables in Arab Lane.	42	6,142 0 0	.....	Do. do.
27	Providing a south-west drain with water gullies and water tables at Gilder Street.	43	4,538 0 0	.....	Do. do.
28	Constructing a south-west drain along the passage on the north of water tank near Gowalia Tank Road.	44	4,365 0 0	.....	Do. do.

New Works, &c.—*Continued.*

Consecutive Number.	Description of Work.	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1913.	Remarks.
			Rs. a. p.	Rs. a. p.	
	WORKS SANCTIONED BUT NOT UNDERTAKEN AT THE CLOSE OF THE YEAR—*contd.*				
	Drainage.—contd.				
29	Providing a south-west drain in Gowalia Tank Road from the existing south-west drain up to the proposed passage.	45	4,845 0 0	.....	Commissioners' sanction has been applied for to invite tenders for the work.
30	Relieving arches at Falkland Road.	46	5,000 0 0	.....	The work will shortly be taken in hand departmentally.
31	Providing a south-west drain and 2 full-sized and half-sized water entrances with water tables at Ripon Road Cross Lane East.	47	3,332 0 0	.....	Commissioner's sanction has been applied for to entrust the work to petty works contractors.
32	Laying 9″ pipe sewer and raise a 6″ drain in the passage to the north of Low, Level Channel No. II, Delisle Road, near Parbhadevi.	48	9,217 0 0	.....	The work will be taken in hand shortly.
33	Renewing the storm-water arched drain with a manhole and outfall behind the Marine Lines Station at Kennedy Sea Face.	49	4,081 0 0	.....	Commissioner's sanction has been applied for for carrying out the work departmentally.
	Water Works.				
34	Construction of quarters for the Water Works Office Staff on the Babula Tank site.	59	21,261 0 0	.....	Commissioner's instructions are awaited regarding the plans and estimates which have been submitted for the work.
	Cemeteries (Burning and Burial grounds).				
35	Filling in a portion of Haines Road Cemetery.	61	10,000 0 0	9 8 0	The work will be commenced shortly.
36	Providing a wall for protecting the Mahim Burning and Burial ground from the inroads of the sea.	62	19,953 0 0	114 0 0	The matter is under consideration.
	Miscellaneous.				
37	Construction of a fountain at Chawpati.	64	7,000 0 0	.....	No tender having been received it is proposed to entrust the work to Messrs. Ramji Keshavji & Co. and Commissioner's instructions in the matter are awaited.

New Works, &c.—(*Continued.*)

Consecutive Number.	Description of Work.	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1913.	Probable date of completion.
	WORKS IN PROGRESS AT THE CLOSE OF THE YEAR.				
	Buildings and Sanitary Structures.				
38	Construction of stables and chawls for B. Ward at Jail Road.	11	1,92,300 0 0	48,991 13 5	1st June 1914.
39	Construction of chawls for Bigaries at Arthur Road.	12	1,20,384 0 0	81,469 1 6	30th April 1913.
40	Construction of a stable for E. Ward, West, at Kamathipura.	13	75,000 0 0	31,867 12 9	31st March 1914.
41	Construction of 25 bathing places in the City.	14	35,739 0 0	20,505 12 3	Do.
42	Construction of buildings for Primary Schools.	15	5,00,000 0 0	1,22,692 1 6	Do.
43	Construction of Overseer's quarters in the Victoria Gardens.	17	7,298 0 0	1,152 15 3	15th April 1913.
	Roads and Overbridges.				
44	Construction of the southern portion of Reay Road from near its junction with De Lima Street to Wari Bunder Road.	20	3,11,511 7 5	1,38,921 12 9	16th June 1913.
45	Construction of an overbridge at Elphinstone Road, B. B. & C. I. and G. I. P. Railways.	21	3,57,762 0 0	2,27,915 3 10	31st December 1913.
46	Construction of an overbridge at Currey Road, G. I. P. Railway.	22	7,16,563 0 0	5,01,772 14 7	31st March 1914.
47	Construction of an overbridge at Clerk Road, B. B. & C. I. Railway.	23	3,03,000 0 0	51,759 2 10	Do.
48	Construction of an overbridge at DeLisle Road.	24	10,30,000 0 0	5,26,564 6 6	31st March 1915.
49	Construction of a road from Mount Road (through Rose Cottage Lane) to Matharpakhadi.	25	26,805 0 0	.....	28th February 1914.
50	Construction of a road from B. B. & C. I. Railway Matoonga Station westward to Lady Jamshedji Road land to be acquired for 60 feet road to be of 40 feet.	26	1,94,270 0 0	.....	31st July 1914.

New Works, &c.—*Continued.*

Consecutive Number.	Description of Work.	No. of progress report.	Sanctioned Grant.	Expenditure up to the end of March 1913.	Probable date of completion.
			Rs. a. p.	Rs. a. p.	
	WORKS IN PROGRESS AT THE CLOSE OF THE YEAR—*contd.*				
	Drainage.				
51	Construction of latrines and urinals in various parts of the City.	16	62,163 0 0	58,483 11 2	28th February 1914.
52	Constructing a hopper on the vacant land to the north of Pilot Bander Pier, Colaba.	18	4,991 0 0	88 13 0	31st July 1913.
53	Construction of a latrine and a Pail Depôt at Ghorupdeo Road.	19	17,116 0 0	103 3 8	21st May 1913.
54	Completion of house drainage connections in different parts of the City.	50	8,56,526 0 0	7,61,687 6 5	Uncertain.
55	Sewerage of the Elphinstone Reclamation District.	51	3,41,362 0 0	44,408 10 7	5th May 1914.
56	Giving street connections to storm-water drains in the City.	52	17,895 9 3	13,920 12 6	Uncertain.
57	Storm-water drain in Supari-bag Road.	53	2,72,264 0 0	1,07,030 8 9	6th September 1913.
58	Measures for relieving the surcharging of sewers.	54	18,68,632 0 0	12,98,012 10 3	31st December 1914.
59	Provision of Ejectors in the Colaba Sub-District.	55	99,265 0 0	88,566 0 7	31st March 1914.
60	Providing fair weather cast iron concrete covers and frames for water entrances and removing obsolete perforated stones and constructing new type water-gully in the whole of A. Ward.	56	10,000 0 0	7,244 10 2	30th June 1913.
61	Opening and examining 9" pipe sewer in Colaba Road and replacing it by cast iron pipes.	57	46,200 0 0	37,195 5 4	28th February 1914.
62	Remodelling drainage arrangements in Arthur Crawford Markets.	58	13,217 0 0	8,399 2 0	Do.
	Cemeteries.				
63	Providing a boundary wall at Haines Road Cemetery.	60	15,320 0 0	4,890 10 4	15th May 1913.
	Miscellaneous.				
64	Construction of a fountain at Cruickshank Road.	63	5,000 0 0	27 6 9	14th July 1913.

NEW WORKS.

19. The following works which have been referred to in the last year's Administration Report were completed at the total costs noted against each :—

	Rs.	a.	p.
Construction of a Primary School building at the Junction of Morland Road and Sankli Street	95,941	1	11
Construction of a market at Kamatipura	50,670	1	2
Construction of a compound wall, additional bathing places and paving the yard at the Halalkhores' chawls at Valpakhadi	13,363	4	6
Construction of Stables, Dispensary Offices, Store-room and quarters for Shalotri and Veterinary Inspector at Sankli Tank	1,32,603	15	11
Construction of a Fire Brigade Station at Elphinstone Bridge Road	61,414	2	10
Construction of Sweepers' quarters, Dust-bin stand with a shed and a circular bathing place at the junction of Khara Tank and Agiary Lane	2,336	9	9
Construction of permanent quarters for bigaries at Deonar	16,813	6	8
Construction of Offices for D Ward, Building and Lighting Inspectors, and quarters for sluicemen at Gowalia Tank	8,242	7	6

BATHING PLACES.

Constructing 25 bathing places in the City.

20. Out of the proposed 25 bathing places 11 have been constructed at a total cost of Rs. 20,505.

21. Further proposals (1) for enlarging the pavement of the 7 bathing places already constructed, and (2) for constructing 5 new bathing places have been forwarded to the Municipal Commissioner.

Construction of shops on the Southern and Western frontages of the Arthur Crawford Markets.

22. Revised plans and estimates were under consideration at the close of the year.

Construction of a protecting wall at Mahim Cemetery.

23. The question of the construction of a combined storm-water outfall and groyne was under consideration at the close of the year.

Construction of a stable at Kamatipura 10th Street.

24. This work, which is referred to in the last year's Administration Report, was in progress at the close of the year.

25. The certified expenditure on the work upto the 31st March 1913 amounted to Rs. 31,867-12-9.

Construction of Bigaris Chawls at Arthur Road.

26. This work which is referred to in the last year's Administration Report was in progress at the close of the year.

27. The certified expenditure on the work up to the 31st March 1913 amounted to Rs. 81,469-1-6.

Renewing the fence at Hornby Vellard.

28. A grant of Rs. 5,127 having been provided for this work in the Budget for 1911-1912, tenders were invited for the same and that of Mr. Haji Ahmed Haji Suleman being the lowest of six tenders received was accepted by the Municipal Commissioner under his No. 31232 of the 8th February 1912. Orders to commence the work were issued to the Contractor on the 10th April 1912, and the same was completed by him at a total cost of Rs. 3,833-6-6.

Construction of a shed for Municipal Motor cars at Palton Road.

29. A grant of Rs. 4,909 having been sanctioned for the work under the Corporation's Resolution No. 3351, dated the 7th September 1911, tenders were invited for the same and that of Messrs. Alikhan Fathekhan and Co. being the lowest of five tenders received was accepted by the Municipal Commissioner under his No. 31411, dated the 10th February 1912. Orders to commence the work were issued to the Contractors on the 10th April 1912, and the same was completed by them at a total cost of Rs. 3,783-14-1.

Construction of huts for Road Bigaris at Babula Tank.

30. A grant of Rs. 3,788 from surplus cash balance having been sanctioned for this work under the Corporation's Resolution No. 7167, dated the 7th March 1913, tenders were invited for the same and that of Messrs. Alikhan Fathekhan & Co. being the lowest of five tenders received was accepted by the Municipal Commissioner under his No. 8343, dated the 13th June 1912. Orders to commence the work were issued to the Contractors on the 22nd July 1912, and the same was completed by them at a total cost of Rs. 3,149-5-0.

Construction of Overseers' quarters in the Victoria Gardens.

31. A grant of Rs. 7,298 having been provided for this work in the Budget for 1912-1913, tenders were invited for the same and that of Messrs. Haji Ahmed Haji Suleman & Co. being the lowest of three tenders received, was accepted by the Standing Committee under their Resolution No. 4535, dated the 6th November 1912. Orders to commence the work were issued to the Contractors on the 16th December 1912, and the same was in progress at the close of the year.

32. The certified expenditure on the work upto the 31st March 1913 amounted to Rs. 1,152-15-3.

Construction of a Boundary wall and Barbed Wire Fence to the Hindu Cemetery at Haines Road, Worli.

33. A grant of Rs. 15,320 having been provided for this work in the Budget for 1912-13, tenders were invited for the same and the only tender received from Messrs. Narayen Pandurang & Co. was accepted by the Standing Committee under their Resolution No. 4411 of the 20th October 1912. Orders to commence the work were issued to the Contractors on the 16th December 1912, and the same was in progress at the close of the year.

34. The certified expenditure on the work up to the 31st March 1913 amounted to Rs. 4,890-10-4.

Construction of stables, &c., at Jail Road, North.

35. A grant of Rs. 1,92,300 having been provided for this work in the Budget for 1911-12, tenders were invited for the same and that of Messrs. Alimahomed Karimbhai Peermahomed & Co. being the lowest of seven tenders received was accepted by the Standing Committee under their Resolution No. 845 of the 10th May 1911. Orders to commence the work were issued to the Contractors on the 2nd September 1912 and the work was in progress at the close of the year.

36. The certified expenditure on the work up to the 31st March 1913 amounted to Rs. 51,007-9-1.

Filling in Tanks.

37. The work of filling in the Babula Tank was completed during the year. Health Camps and workmen's huts were erected on the ground reclaimed.

38. A large saving in cost was effected by utilizing road sweepings and road materials from the work of road repairs for filling in the tank. The total cost of the work amounted to Rs. 58,857-15-4.

39. The work of filling in the Gowalia Tank was entrusted to Contractors, Messrs. Virji Tejoo & Co., and completed by them during the year at a cost of Rs. 1,46,306-4-9.

New Roads.

40. The construction of the southern portion of Reay Road, *i.e.*, from Dockyard Road to Wadibandar Road, was taken in hand, as the contemplated Overbridge across the Wadibander Sidings to the harbour was definitely abandoned, and a road on the level constructed straight from the north end of the Frere Road to Wadibandar Road by the Port Trustees. The work was entrusted to Messrs. Teju Kaya and Company, who have carried out a large amount of cutting in earth and rock, and prepared the road formation and footpaths for about 700 feet in length. The certified expenditure on the work amounted to Rs. 9,535-13-9 at the end of the year.

41. The acquisition of land required for the construction of East and West Road from B. B. & C. I. Railway Matunga Station to Mahim Bazar Road was almost completed at the end of the year. The amount paid for the acquisitions upto the 31st March 1913 was Rs. 37,617-2-5.

42. A road along the Tulsi Pipe Line over the covered low-level channel for storm water near Dadar Station was constructed during the year at a cost of Rs. 6,078-1-0 as per agreement with Mr. Mathurdas Gokaldas, who gave land (800 feet long by 30 feet wide) free of cost for the construction of the channel.

Overbridges.

43. During the year the construction of the Clerk Road Overbridge, G. I. P. Railway, was completed.

44. At Elphinstone Road Overbridge the major portion of the iron work has been fixed in position and the work of forming the road surface on the east approach has been taken in hand.

45. The work of diversion of sewers, storm-water drains and water mains in connection with the Currey Road Overbridge having been completed the Railway Co. have commenced the work of excavating the foundation trench of the approaches.

46. The work of diversion of ovoid sewers, storm-water drains, and pipe sewers in connection with the Clerk Road Overbridge, B. B. & C. I. Railway, has been completed. The work of diverting the water mains is nearly completed. The land is now almost ready for being handed over to the Railway Company.

47. All the properties required for the DeLisle Road Overbridge, B. B. & C. I. Railway, according to the original alignment of 40 ft. width have been acquired by the Municipality. Fresh proposal has been submitted to the Corporation for their consideration for making the width of this Overbridge 80 ft.

48. The certified expenditure for Overbridges amounted to Rs. 5,88,917-4-3 at the close of the year.

49. The question of the location and allocation of cost of the Dadar Overbridge has almost been settled between the Municipality and the two Railways.

Disposal of Town Sweepings in the City, Kurla-Deonar Railway Works.

50. About 1,242 old pine wood sleepers were removed and replaced by new half-round teak sleepers on the main line at a cost of Rs. 8,694.

51. Ten new kutchra wagons were built during the year bringing the total number of kutchra wagons to 106 in addition to six iron wagons for liquid refuse from drains and seven Brake vans.

Area reclaimed.

52. The additional area reclaimed during the year was about 6 acres bringing the total area reclaimed to 150 acres.

53. There was no fire during the year.

54. The undermentioned four accidents occurred during the year :—

(1) On the 5th of May 1912, two wagons were derailed as the pointsman of the G. I. P. Railway failed to turn the point in the proper direction.

(2) On the 15th of July 1912 the front part of an engine got derailed on the temporary siding. This was owing to the ground having been rendered very soft by the rains.

(3) On the 28th of September 1912 a wagon was derailed on the main lines The cause of this derailment could not be ascertained.

(4) On the 13th of March 1913 a wagon was derailed on the main line owing to the breakage of an axle box.

55. Only one kutchra train was run for the most part of the year as kutchra was being utilized in reclaiming the storm-water reservoir on the north of Clerk Road and west of the Race Course.

56. There was no epidemic during the year and there were only two deaths amongst the labour staff consisting of about 400 people. This indicates that the general health of the staff was in a very satisfactory condition.

57. The maintenance of the school at Deonar was continued by the mission for the depressed classes and the attendance at the school was fairly good during the year.

C.

Drainage Loan Works.

MALABAR HILL SECTIONAL SEWERAGE WORKS.

58. No damage of any kind was done either to the Sea Walls or to the Biological Installation during the last rains.

CUTTING OUT ROCKY BARRIERS IN THE CHANNEL AT LOVE GROVE.

59. This work is still held in abeyance, and it is now almost certain that it will be rendered unnecessary owing to the decision of the Corporation to extend the sewage outfall further out into the sea and the proposal to do away with the existing love Grove sluices and to divert all the surface waters of the low lands of the City to the Worlee outfall. A report on this latter subject having been submitted to the Corporation by the Municipal Commissioner, the Corporation, under their Resolution No 2305, dated 15th July 1912, decided to consult Mr. G. Midgley Taylor, regarding the diversion of the storm waters to Worlee and Mr. Taylor has now submitted his report recommending that course. Mr. Taylor's report is now under the consideration of the Municipal Commissioner.

LARGER EJECTORS IN THE COLABA SUB-DISTRICTS Nos. III, IV & V.

60. The Ejector Station No. 3 is working satisfactorily.

61. During the year under report, the tubbing and ejectors at No. 4 Station were installed and the new ejectors at this station are also working satisfactorily.

62. As regards Station No. 5, the excavation is almost ready, but it was decided to order out from Messrs. Hughes and Lancaster new ejectors for this station. The quotation of Messrs. Hughes and Lancaster, amounting to £481, for new ejectors in this district was accepted by the Standing Committee under their Resolution No. 5102, dated 4th December 1912, and Messrs. Hughes and Lancaster have recently advised that the ejectors are being shipped.

63. The total certified expenditure up to the end of the year amounted to Rs. 88,566-0-7.

SURFACE DRAINAGE OF HIGH LANDS.

STORM-WATER DRAIN IN REAY ROAD FROM CONNAUGHT ROAD TO THE LAKRI BUNDER.

64. As anticipated in the last year's report, the drain was completed long before the rains of 1912, and it worked satisfactorily during the rains. Although the Contract date for the completion of the works was 12th June 1912, the drain was actually completed by the Contractors, Messrs. Dhondiba Hanmantrao Alli Mahomed & Co., on the 9th April 1912.

65. The total certified expenditure up to the end of the year amounted to Rs. 5,24,917-10-0.

DREDGING AND SCREENING CHAMBERS.

66. All the masonry work in connection with these chambers has been completed by the Contractors, Messrs. Teju Kaya & Co., in a satisfactory manner, and the dredging and screening machinery supplied by Messrs. S. Stott & Co., from England, has been fixed by the Municipal Workshops departmentally. The work of the roofing of the chambers was entrusted to Messrs. Geo. Gahagan & Co., who completed it on the 11th June 1912. The necessary electric plant for driving the machinery and lighting the chambers have also been erected by the Municipal Workshops departmentally, and the chambers will shortly be brought into use.

67. The total certified expenditure up to the end of the year amounted to Rs. 2,86,844-14-6.

FOUNDATIONS AND THE SUPERSTRUCTURE OF THE NEW ENGINE HOUSE AT LOVE GROVE.

68. Both these works, which were entrusted to Messrs. Teju Kaya & Co., have now been practically completed by the Contractors, and the work of the roofing of the new engine house, which were entrusted to Messrs. Geo. Gahagan & Co., in accordance with the Standing Committee's Resolution No. 343, dated 17th April 1912, has also been completed. Messrs. The Lilleshall & Co., Ltd., are now proceeding very satisfactorily with the erection of the machinery.

69. The total certified expenditure upto the end of the year amounted to Rs. 2,56,307-8-4.

NEW BOILER HOUSE AT LOVE GROVE.

70. Tenders for this work were invited and made returnable on the 4th November 1912. Three tenders were received, of which that of Messrs. Teju Kaya & Co., reduced by 4¾ per cent. below their originally tendered rates, was accepted by the Standing Committee under their Resolution No. 4975, dated the 27th November 1912. The Contractors made very good progress during the year.

71. Tenders for the roofing of the boiler house were invited and made returnable on the 27th February 1913. Only one tender from Messrs. Garlick & Co. was received, and it was accepted by the Standing Committee under their Resolution No. 7105, dated the 5th March 1913. The Contractors were proceeding satisfactorily with the manufacture of the materials during the year under report.

72. The total certified expenditure up to the end of the year amounted to Rs. 35,227-5-7.

EXTENSION OF THE LOW LEVEL CHANNEL No. II FROM DELISLE ROAD TO DADAR ROAD.

73. During the year under report some more pieces of land through which the Channel was constructed under the powers reserved to the Municipal Commissioner under Section 222 of the Municipal Act, were purchased by the Municipality. There now remain very few plots which have not yet been acquired, and negotiations are going on with the owners in the matter.

74. The total certified expenditure up to the end of the year amounted to Rs. 2,67,172-4-2.

STORM-WATER DRAIN AND PIPE SEWER IN CURREY ROAD AND DELISLE ROAD, IN CONNECTION WITH THE OVERBRIDGE AT THE CURREY ROAD LEVEL-CROSSING.

75. Although the contract date for the completion of these works was 8th April 1912, they were not completed by the Contractors, Messrs. Napoo Patramal & Co., until 31st July 1912. The main reason for this was the delay on the part of the G. I. P. Railway Company in supporting their Permanent-way.

76. The total certified expenditure up to the end of the year amounted to Rs. 24,355-8-0.

STORM-WATER DRAIN IN PAREL ROAD AND CONNAUGHT ROAD, FROM THE FOOT OF THE BYCULLA BRIDGE TO THE JUNCTION OF REAY AND CONNAUGHT ROADS.

77. It was stated in the last year's report, that this drain was expected to be completed before the monsoon, and this expectation was realized, the drain having been completed on the 21st May 1912. It worked satisfactorily during the last rains. The great flooding which used to take place in this part of Parel Road was not noticeable during the last rains, and the drain thus proved to be of immense service to the locality.

78. The total certified expenditure up to the end of the year amounted to Rs. 3,06,640-0-0.

STORM-WATER DRAIN IN VICTORIA ROAD, FROM ITS JUNCTION WITH PAREL ROAD, TO 1,400 FEET EASTWARDS.

79. This work was finished by the Contractors, Messrs. Dhondiba Hanmantrao Alli Mahomed & Co., on the 6th August 1912, and it worked satisfactorily during the last rains.

80. The total certified expenditure up to the end of the year amounted to Rs. 17,709-12-0.

STORM-WATER DRAIN, PIPE SEWER AND OVOID SEWER IN CLERK ROAD, NEAR THE B. B. & C. I. RAILWAY LEVEL-CROSSING.

81. The contract date for the completion of these works was 13th March 1912, while the works were actually completed by the Contractors, Messrs. Virjee Teju & Co., on 12th January 1913. The Contractors were considerably delayed in the prosecution of their works by the B. B. & C. I. Railway Company not having supported their Permanent-way, until the middle of May 1912, and subsequently by the monsoon and abnormal weather in November.

82. The total certified expenditure up to the end of the year amounted to Rs. 32,393-4-0.

STORM-WATER DRAIN IN SOPARI BAUG ROAD.

83. As the City Improvement Trust acquired a large piece of land on the East of Sopari Baug Road for the widening of the said road, it was thought advisable to construct a storm-water drain required for this district in this acquired piece of land, before a roadway was actually constructed over the same, thereby saving expenses of road repairs, which would have otherwise been incurred. The Corporation sanctioned this work under their Resolution No. 2469, dated 22nd July 1912. Tenders for the work were invited and made returnable on the 25th November 1912, and that of Messrs. Teju Kaya & Co., the lowest of the three received, was accepted by the Standing Committee under their Resolution No. 5299, dated 12th December 1912. The Contractors have made very satisfactory progress during the year and the drain is expected to be completed before the rains.

84. The total certified expenditure up to the end of the year amounted to Rs. 1,07,030-8-9.

STORM-WATER DRAIN IN REAY ROAD FROM CONNAUGHT ROAD TO KALACHAUKI ROAD.

85. A provision of about four lakhs of rupees having been made in the Budget for 1913-14, for the continuation of the drain in Reay Road, it was decided to take in hand at once the construction of the above drain. Tenders for this drain were invited and received on the 31st March 1913.

STORM-WATER DRAIN IN GIRGAUM BACK ROAD.

86. Tenders for this work were invited and made returnable on the 7th October 1912. Three tenders were received, of which that of Messrs. Napoo Patramal & Co., amounting to Rs. 11,939-0-11, being the lowest, was accepted by the Standing Committee under their Resolution No. 4410, dated 30th October 1912. The work was completed by the Contractors on the 18th January 1913, *i. e.*, precisely on the date fixed in the contract for the completion of the work.

87. The total certified expenditure up to the end of the year amounted to Rs. 11,463-12-0.

STORM-WATER DRAIN IN DELISLE ROAD.

88. Tenders for this work were invited and made returnable on the 14th October 1912. Only one tender from Messrs. Napoo Patramal & Co., amounting to Rs. 6,267-1-6, was received, and was accepted by the Standing Committee under their Resolution No. 4536, dated the 6th November 1912. The work was completed by the Contractors on the 18th December 1912, *i. e.*, precisely on the date fixed in the contract for the completion of the work.

89. The total certified expenditure up to the end of the year amounted to Rs. 5,748-2-0.

SEWERAGE OF THE NORTH OF THE ISLAND.

90. A scheme for the sewerage of the north of the Island was submitted to the Commissioner during the year and it was placed by the Commissioner before the Corporation, who have authorized the Commissioner to consult Mr. G. Midgley Taylor regarding the details of the works required at the proposed pumping station for the north of the Island, and have referred the proposal for laying sewers in the north of the Island to a Committee for consideration and report.

ADDITIONS TO THE MAIN SEWERS DUE TO THE DUPLICATION OF THE TANSA MAIN.

91. The Corporation having decided to duplicate the Tansa Main, a report was submitted to the Commissioner advising that the duplication of the Tansa Main would require considerable additions to the existing main sewers and the pumping machinery at Love Grove. The matter was subsequently, with the approval of the Corporation, referred to Mr. G. Midgley Taylor for an opinion and Mr. Taylor's report concurring in the necessity of large additions to the main sewers and to the pumping plant at Love Grove was received during the year. The report was submitted by the Commissioner to the Corporation for their sanction, to proceed at once with the additional sewers required.

SEWERAGE OF THE ELPHINSTONE RECLAMATION DISTRICT.

92. The Commissioner having forwarded to the Corporation a scheme for the above works, the Corporation approved of the same under their Resolution No. 3158, dated the 22nd August 1912. Tenders for the laying of pipe sewers in this district were invited and made returnable on the 21st November 1912. Only one tender, that of Messrs. Sayaji Naguji & Co., was received, and was accepted by the Standing Committee under their Resolution No. 5298, dated the 12th December 1912. The contract date for the completion of these works is 3rd May 1914. The Contractors are making very good progress with the works, although they are considerably troubled with subsoil water in Frere Road.

93. The quotation of Messrs. Hughes and Lancaster, amounting to £ 3,150, for 3 ejectors of 750 gallons each, with a 21 ft. C. I. tubbing, required in connection with the above scheme, was accepted by the Standing Committee under their Resolution No. 7108, dated the 5th March 1913, and Messrs. Hughes and Lancaster have been requested to proceed with the manufacture of these ejectors and tubbing.

94. The total certified expenditure up to the end of the year amounted to Rs. 44,408-10-7.

D

DRAINAGE ORDINARY WORKS.

HOUSE DRAINAGE CONNECTIONS.

95. The street portions of the house drainage connection works in the City were carried out departmentally during the year, 208 connections being made at a total cost of Rs. 10,625-0-10.

96. These connections serve 339 premises of which 268 are drained on the closed system, 52 on the open system and 19 premises which have latrines on the intermediate system.

97. In addition to these, 65 storm-water connections were made at a total cost of Rs. 2,078-2-8.

98. The street connections referred to in the preceding para. relate to (1) new buildings, (2) alterations to existing buildings, and (3) premises in the newly sewered districts.

99. Several 6" branch drains were laid for bringing certain undrained premises within 100 feet of the Municipal sewers, as required by Section 231 of the Municipal Act. About 45 estimates and 500 plans were prepared for Notices under Sections 222, 230, 231, 232, 232A and 238 of the Municipal Act.

100. Action was taken under Section 231 of the Municipal Amendment Act, calling upon the owners of the properties comprised in the Malabar Hill Sewered District to connect their premises with the new sewers. Of the 15 Notices served, 13 were complied with during the year, and in the remaining 2 cases the works were in progress.

101. The work of remodelling groups or blocks of buildings draining into common house gullies was continued departmentally, and the following 7 house gullies were remodelled during the year at a cost of Rs. 17,899-12-2, out of advances voted for the purpose, the expense being subsequently recovered from the house-owners as provided under Section 232A of the Municipal Act:—

Serial No.	Job No.	Situation of General House gullies.	Sanctioned Amount.	actual cost.	REMARKS.
			Rs. a. p.	Rs. a. p.	
1	84	Common House gully between Falkland Road, 1st Carpenter Street, Cowasji Patel Tank Road and Khetwadi Main Road	5,221 0 0	4,667 8 9	
2	94	Common House gully between Kumbharwada Street and Bhandari Street	5,318 0 0	4,564 2 5	
3	101	House gully situated on the west of DeLisle Road	1,162 0 0	1,046 9 4	
4	91	House gully between Sandhurst Road, Falkland Road, Duncan Road and Kandewadi Street	3,088 0 0	2,728 11 4	
5	102	Common house gully between 2nd and 3rd Falkland Road Cross Lanes and Khetwadi Back Road	1,131 0 0	1,130 15 10	
6	107	House gully to the north of Mahomedan Street at its junction with Ghelabhai Street ...	2,476 0 0	2,378 15 11	
7	106	House gully situated to the north of 1st Agiary Lane and west of Dhanji Street	1,445 0 0	1,382 12 7	
		Total ...	19,841 0 0	17,899 12 2	

102. In all 51 common house gullies have been remodelled up to the end of the year 1912-13, at a total cost of Rs. 87,718-12-4. Out of this sum, Rs. 86,204-3-10 have been recovered from the parties by this department and efforts are being made to recover the balance of Rs. 1,514-8-6.

PROVISION OF MANHOLES OVER STORM-WATER DRAINS.

103. From the grant of Rs. 3,000 provided for the purpose, 26 manhole frames and covers, *viz.*, 10 at Paidhuni Road and 16 at Pinjrapole Road were provided at a cost of Rs. 1,993-5-8.

IMPROVED CONCRETE COVERS OVER WATER ENTRANCES.

104. These covers having been found effective 443 such covers were provided in A Ward, and 34 in D Ward., and their cost was met from Section 5 (*a*) Repairs and Alterations to Miscellaneous Drains and Gutters.

MAINTENANCE AND UP-KEEP OF OPEN MAIN DRAIN AND LOW-LEVEL CHANNELS.

105. A sum of Rs. 3,000 was provided for the work. It was in progress throughout the year. The expenditure amounted to Rs. 2,971-9-3.

106. A sum of Rs. 3,200 was provided for removing the silt from and cleaning the above drains and the work was carried out departmentally at a cost of Rs. 3,144-12-0.

107. A sum of Rs. 2,500 was provided for cleaning and maintaining drains attached to Municipal properties, and this work was carried out departmentally at a cost of Rs. 2,053-1-0.

108. A grant of Rs. 1,000 was provided for repairing the underground flushing chambers and cisterns, and this work was carried out departmentally at a cost of Rs. 894-12-2.

109. A sum of Rs. 5,000 was provided for the construction of relieving arches for strengthening the Old Main Drain in Falkland Road. The work was carried out Departmentally at a cost of Rs. 3,883-12-7.

PUBLIC LATRINES AND URINALS.

110. The work of constructing five seated and three seated latrines on the flushing system with palisades in Tank Bunder at Clerk Road was entrusted to Messrs. Abdually Karimbhai and Company, and it was completed at a cost of Rs. 2,787-5-0.

111. The work of constructing a 12-seated latrine on the water carriage system as Banganga, Walkeshvar Foreshore was entrusted to Messrs. Haji Ahmed Haji Suleman and Company, and the same was completed at a cost of Rs. 3,059-14-0. The work of putting up 12 automatic flushing Tanks of Shanks Patent will be carried out departmentally as soon as the tanks are received from England.

112. The work of constructing a three-seated Torfit pattern urinal in Ghorupdeo Road opposite Kaisar-i-Hind Mill was entrusted to Messrs. Abdulally Karimbhai and Company, and the same has been completed at a cost of Rs. 599-15-1.

113. The work of constructing four water-closets at Chinchpogli Fire Brigade Station has been carried out departmentally at a cost of Rs. 2,067-15-7.

114. The work of constructing water-closets at the Foremen's quarters at the different Fire Bridgade Stations has been carried out departmentally at a cost of Rs. 2,147-12-11.

115. The work of providing three water-closets, *viz.*, one on the 1st floor of the Arthur Crawford Markets for the use of the Market Staff and the other two on the 2nd floor for the Superintendnt's use was carried out departmentally at a cost of Rs. 2,071-4-7.

116. The work of constructing a latrine and a Pail Depôt with two hoppers at Ghorupdeo Road was entrusted to Messrs. Haji Ahmed Haji Suleman & Co. and was in progress at the end of the year.

117. The work of constructing a large Pail Depôt at Belvedere Hill Road was entrusted to the Petty Works Contractors and completed by them at a cost of Rs. 1,947-15-2.

118. The work of constructing a hopper on the vacant land to the north of Pilot Bander Pier at Colaba is being carried out departmentally. The work was nearly completed at the close of the year.

REPLACEMENT OF STONEWARE PIPES IN COLABA SECTIONAL DISTRICT BY CAST-IRON ONES.

119. A further grant of Rs. 5,000 was provided for this work in addition to the balance of Rs. 5,166 renewed from the last and previous year's grants. The work was taken in hand in May 1912 and was in progress at the close of the year.

120. The certified expenditure on the work amounted to Rs. 6,215-12-0 at the end of the year.

CLEANING STORM-WATER DRAINS.

121. This work for which an annual grant of Rs. 6,000 is provided was carried out departmentally during the dry months of the year and the total expenditure incurred thereon amounted to Rs. 5,837-3-1.

PROVIDING A COVERED DRAIN FOR DRAINING THE SUB-SOIL WATER IN NEPEAN SEA ROAD, OPPOSITE H. H. THE NIZAM'S BUNGALOW.

122. This work was entrusted to Contarctors Messrs. Ramji Keshavji & Co., and completed by them during the year at a cost of Rs. 4,089-10-0.

123. The work of constructing a storm-water drain in the Victoria Gardens was entrusted to the Petty Works Contractors (Messrs. Abdulally Karimbhai and Haji Ahmed Haji Suleman & Co.), and the same was completed by them at a cost of Rs. 3,280-3-7.

124. The work of remodelling drainage arrangements of the Arthur Crawford Market was being carried out departmentally and in progress at the close of the year.

125. The certified expenditure on the work amounted to Rs. 8,401-2-4 at the end of the year.

126. Out of the following 12 works, four were carried out departmentally and eight by the Petty Works Contractors (Messrs. Abdulally Karimbhai and Haji Ahmed Haji Suleman & Co.), and completed during the year at the cost noted against them:—

Serial No.	Particulars.	Sanctioned amount.	Actual cost.	Savings.	How carried out.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Providing 2-12" C I. drain pipes by the side of the existing mains at Dadar Road near the present Tramway terminus ...	792 0 0	561 13 4	230 2 8	Departmentally.
2	Providing 1-15" C I. pipe drain by the side of the existing drain at Dadar Road opposite the Gold Mohor Mills... ...	411 0 0	334 9 8	76 6 4	Do.
3	Providing 2-12" C. I. drain pipes by the side of the existing drain at Dadar Road near its junction with Vincent Road...	663 0 0	514 2 6	148 13 6	Do.
4	Providing 2-12" C. I. drain pipes under the existing culvert at Vincent Road	748 0 0	532 1 5	215 14 7	Do.
5	Providing 12" stoneware pipe drain with ½-sized water entrances for S. W. near the junction of Sewri Old Road, Sewri Cross Road and Sewri Koliwada	2,573 0 0	1,840 7 7	732 8 5	By the petty work contractors.
6	Constructing storm-water masonry drain in Apollo Street...	2,456 0 0	1,789 7 7	666 8 5	Do.
7	Providing a covered S. W. drain with water entrances in Colaba Road between Victoria Bunder Road and Ketridge Road ...	3,376 0 0	2,413 0 5	962 15 7	Do.
8	Providing water tables and four water entrances at Mustan Tank Cross Lane	1,144 0 0	730 15 6	413 0 6	Do.
9	Providing storm-water drain with ½ sized water entrances at Lalwadi near Parel Chawl Road...	1,123 0 0	953 6 8	169 9 4	Do.
10	Constructing a storm-water drain with water entrances in 1st Umerkhadi Road	1,707 0 0	1,297 11 10	409 4 2	Do.
11	Providing water tables and water entrances at Gowalia Tank Road	1,987 0 0	1,498 0 8	488 15 4	Do.
12	Covering the existing open side drain and providing five full-sized and six half-sized water entrances at the north of the Wadi Bunder Road	3,885 0 0	2,460 13 0	1,424 3 0	Do.
	Total Rs...	20,865 0 0	14,926 10 2	5,938 5 10	

127. A sum of Rs. 19,762 was provided in the Budget for substituting ejectors of 700 gallons capacity in place of the existing ones of 250 gallons in Mazagon No. 2 District. Orders have been placed with Messrs. Richardson and Cruddas for the manufacture of some of the tubbing plates required and as soon as these are obtained the work will be taken in hand.

128. A sum of Rs. 10,000 was provided in the Budget for making fair weather C. I. concrete covers and frames for water entrances and for removing obsolete perforated stones and constructing new typed water gullies in the whole of A ward.

129. The work was being carried out departmentally and the certified expenditure thereon amounted to Rs. 7,259-15-3 at the close of the year.

MISCELLANEOUS.

130. Works to the extent of about Rs. 70,212 including the repairs and alterations to and cleaning of sewers and drains generally and making minor additions thereto, and the drainage arrangements of the various Health Camps, etc., as well as all new Drainage Works provided in the Budget for 1912-13 were carried out during the year. Out of these, works costing about Rs. 32,329 were carried out departmentally and the rest were executed through the agency of the Petty Work Contractors.

131. Daily reports in the prescribed form showing the progress made in the work of cleaning main sewers and pipe sewers by means of scrapers and discs were submitted by the Chief Inspector, Drainage.

E.

Regulation of Streets and Buildings.

132. Building Applications—

Year.	Number of buildings for which plans were received and passed wholly or subject to certain conditions.
1908-1909	3,827
1909-1910	3,198
1910-1911	3,237
1911-1912	3,404
1912-1913	3,618

Notices and Summonses issued.

133. 4,518 Notices were issued on house-owners under various sections of the Municipal Act. This number is less than the previous year's total by 1,391.

134. Prosecutions were instituted in the Magistrates' Courts in 1,314 cases under the Municipal Act against the house-owners, who failed to comply with the Notices served upon them. In 668 of these cases the parties complied with the Municipal requirements before service of the Summonses which were therefore withdrawn. In 159 cases the parties were warned and discharged. In 314 cases they were convicted and fined, and 173 cases were postponed to dates after the end of the current year.

135. The amount of fines realized was Rs. 5,009-12-0.

136. The following statement shows the different sections of the Act under which the offenders were prosecuted and other details of the prosecutions during the year :—

Superintendents of Divisions.	No. of Sections of the Act.	No. of Prosecutions.	Cases withdrawn as the requirements were complied with.	Persons warned and discharged.	Persons convicted and fined.	Cases postponed to next year (1913-14.)	Amount of Fines.
							Rs. a. p.
Superintendent, 1st Division.	231	7	7	...	...	...	.....
	246A	1	1	...	...	...	.....
	247	2	2	...	...	...	.....
	297(3)	15	8	...	4	3	75 0 0
	308	2	2	...	...	...	.....
	311	1	1	...	...	...	.....
	313(1)	2	2	...	...	...	.....
	322	18	17	...	1	...	10 0 0
	347	73	41	1	9	22	152 8 0
	349B	2	1	...	1	...	25 0 0
	349C	2	2	...	...	...	.....
	353	2	...	...	...	2	.....
	353A	32	14	...	7	11	190 0 0
	354	41	31	1	5	4	200 0 0
Total ..	...	200	129	2	27	42	652 8 0

Superintendents of Divisions.	No. of Sections of the Act.	No. of Prosecutions.	Cases withdrawn as the requirements were complied with.	Persons warned and discharged.	Persons convicted and fined.	Cases postponed to next year (1913-14.)	Amount of Fines.
							Rs. a. p.
Superintendent, 2nd Division...	231	6	3	2	1	...	10 0 0
	293(3)	35	27	...	6	2	72 0 0
	308	6	4	...	...	2	.....
	308 & 309	1	1	...	...	...	.....
	322	34	33	...	...	1	.....
	347	92	61	...	11	20	283 0 0
	349B	2	1	...	1	...	25 0 0
	353	9	7	...	...	2	.....
	353A	53	29	...	12	12	274 0 0
	354	66	47	...	10	9	210 4 0
Total ...	...	304	213	2	41	48	874 4 0
Superintendent, 3rd Division..	231	24	7	16	1	...	3 0 0
	246A	2	...	1	1	...	5 0 0
	297 (3)	2	...	2	...	...	.....
	304	1	...	1	...	...	.....
	308	4	2	2	...	...	.....
	322	13	4	8	...	1	.....
	347	56	10	29	14	3	108 0 0
	349B	1	...	...	...	1	.....
	353	30	1	17	8	4	50 0 0
	353A	43	2	11	21	9	342 0 0
	354	41	1	22	16	2	434 0 0
	Bye-law No. 40	6	2	3	...	1	.....
Total ...	...	223	29	112	61	21	942 0 0
Superintendent, 4th Division...	231	7	6	1	...	...	.....
	246 A	2	...	...	2	...	7 0 0
	297(3)	1	...	...	1	...	10 0 0
	308	6	4	1	1	...	5 0 0
	322	1	.....	...	...	1	.....
	344 A	4	3	...	1	...	50 0 0
	347	164	86	17	47	14	496 0 0
	349B	6	5	...	...	1	.....
	349C	2	1	1	...	...	.....
	353	54	36	6	10	2	162 0 0
	353A	136	46	9	65	16	1,150 0 0
	354	75	38	8	15	14	238 0 0
	383	1	1	...	...	...	.....
	Bye-law No. 40	12	4	...	6	2	30 0 0
Total ...	...	471	230	43	148	50	2,198 0 0

Superintendents of Divisions.	No. of Sections of the Act.	No. of Prosecutions.	Cases withdrawn as the requirements were complied with.	Persons warned and discharged.	Persons convicted and fined.	Cases postponed to next year (1913-14.)	Amount of Fines.
							Rs. a. p.
Superintendent of Roads ...	305	52	42	...	...	10	.....
	312 (1)	16	16	...	...	...	.....
	313 (1)	47	8	...	37	2	343 0 0
	322	1	1	..	...	...	.....
	...	116	67	...	37	12	343 0 0
Grand Total ..	...	1,314	668	159	314	173	5,009 12 0

Unsafe or Ruinous Buildings.

137. 522 Notices were issued for the removal of unsafe, dangerous or ruinous buildings. 427 of these were complied with either partly or wholly; in 44 cases structures were removed by the Municipality, and 51 cases were pending at the close of the year. 21 buildings or parts of buildings fell during the year. In 18 cases no injury was done and in remaining 3 cases 10 persons were killed and 7 were slightly injured.

Removal of Inflammable and Insanitary Huts.

138. Action was taken under Sections 349 and 380 of the Municipal Act for the summary removal of 516 inflammable and insanitary huts. 426 of these were removed as required and 90 cases were pending at the close of the year.

139. The following statement shows the number of cases submitted to the Standing Committee for their sanction to the removal of unauthorized work during the year :—

WARD.	The number of cases in which applications were made to the Standing Committee for the removal of unauthorized work.	The number of cases in which such sanction was granted.	The number of cases in which the work was actually removed in accordance with the sanction of the Standing Committee.	The number of cases in which the unauthorized work was allowed to remain with modifications.	Cases in which the parties took proceedings against the Municipality in a Court of Law.	REMARKS.
D/1 ...	1	1	1	.....	.....	
F ...	3	.....	3	.....	.....	

Street Improvements or Set-backs.

140. The amount available for street improvement for the year 1912-13 was as follows :—

Current Revenue.

	Rs.	a.	p.
Amount provided in the Budget	1,00,000	0	0
Renewed Grant	2,255	0	0
Amount realized as concession money... ...	12,639	0	0

Loan Works.

	Rs.	a.	p.
Balance out of the advance of Rs. 4,00,000 provided in the Loan Works Budget for 1911-12	1,112	15	0
Advance voted 1912-13	2,10,364	5	10
Total ...	3,26,371	4	10

141. Out of this amount, the sum of Rs. 3,25,623-9-1 was actually paid during the year as under :—

	Rs.	a.	p.
From Revenue including the concession money received	1,14,146	4	3
From the balance out of the advance of Rs. 4,00,000	1,112	15	0
From the advance of voted during 1912-13.	2,10,364	5	10
Rs. ...	3,25,623	9	1
Balance in the Revenue grant renewed in 1913-14 ... ... Rs.	747	11	9

142. The following table shows the number of (1) set-back cases enforced, (2) set-backs added, (3) set-backs paid for, and (4) the area of ground in square yards added to streets during the last five years :—

Year.	Set-backs enforced.	Set-backs added.	Set-backs paid for.	The area of ground added to streets (in square yards).
1908-09	150	145	122	5,046·94
1909-10	112	137	120	7,106·65
1910-11	89	92	111	7,732·25
1911-12	109	114	109	8,838·33
1912-13	124	148	85	25,829·47

143. The following statement shows the areas and values of ground added to streets in each ward during the year :—

Ward.	Areas in Square Yards.	Value.		
		Rs.	a.	p.
A	665·00	59,674	0	0
B	421·00	31,999	0	0
C	1,080·49	86,933	3	2
D	1,584·26	43,413	14	2
E	6,548·19	86,019	14	5
F	1,513·23	17,288	14	9
G	14,017·30	69,773	7	4
Total ...	25,829·47	3,95,102	5	10

F.

ROADS, FOOTPATHS, &c.

REPAIRS AND MAINTENANCE.

Road Repairs.

144. Statement of works executed out of the grant of Rs. 5,36,000 sanctioned for road repairs and maintenance :—

Particulars.	Quantity of Work done in square feet.	Expenditure. Rs.	a.	p.
1. Full metalling	33,61,854	1,84,987	14	7
2. Full patching	16,55,155	60,945	2	10
3. Patching, sanding and sandstoning (including value of the balance of materials on site and miscellaneous works)	.....	1,35,977	8	0
4. Scraping and brushing	.....	50,775	0	0
5. Repairs and maintenance of footpaths, bridges, culverts and road-side retaining walls	.....	14,944	0	0
6. Maintenance and fencing of road-side trees	.....	11,206	0	0
7. General repairs to tools, &c.	.....	29,182	0	0
Total ...	50,17,009	4,88,017	9	5

145. Most of the roads in Bombay have only a thin surface crust of metal and no bottoming of rubble stone as foundation. On account of heavy motor and other traffic it is now found necessary to make the coating of metal thicker than before and also to provide rubble stone bottoming on main thoroughfares.

146. The opportunity was taken when resurfacing portions of Parel Road from J. J. Hospital to Lalwadi and of Arthur Road south of Jacob Circle to provide a sufficient stone bottoming under the road metal.

147. It is intended to gradually improve and strengthen all important roads whenever extensive repairs are necessary.

148. Portions of the following roads were strengthened by heavy metal coating during the year :—

Colaba Causeway, Church Gate Street, Hamam Street, St. George's Road, Paltan Road, Argyle Road, Janjikar Street, Bhendi Bazar Road, Mutton Street, Doctor Street, Grant Road, Ghogari Mohlla, Dadyshet Agiari Street, Old Hanuman Lane, 3rd Bhoiwada, Girgaum Back Road, Mount Pleasant Road, Parel Road, Arthur Road, Falkland Bridge, Bapty Road, DeLisle Road, Clare Road, Reay Road, Parel Chal Road, Suparibag Road, Vincent Road, Government Gate Road, Wadala Road, Sion Road, Haines Road, Dadar Road.

149. The area thus treated totalled 9,93,400 sq. ft. and cost Rs. 77,757, the average cost being Rs. 7-13-3 per 100 sq. ft. Area of other roads repaired but not so treated totalled 23,68,454 sq. ft., average cost thereof being Rs. 4-8-5 per 100 sq. ft.

150. Notwithstanding the substantial increase of 16 per cent. in the wages of all workmen of the Road Branch and the strengthening of road *crust* referred to above, the cost has been kept well within the standard rate of Rs. 5-12-0 per 100 sq. ft., which was fixed over five years ago for providing a 3" coat of metal.

151. The length of roads disturbed by Municipal Departments and other agencies was as follows :—

	R. ft.
Water Department	32,483
Drainage Department	34,030
Bombay Electric Supply & Tramways Co., Ld.... ...	36,625
Callender's Cable and Construction Co. (for Tata Hydro-Electric Supply Co. and Telephone Co.)	29,729
Bombay Gas Company	44,065
Total ...	1,76,932

152. The operations of the Tata Hydro-Electric Co. have now to be added to the usual sources of disturbance. The result has been that over 33½ miles out of the 165 miles of roads in the City have been opened up, being an increase of nearly 40 per cent. over the previous year.

153. Besides the major road openings mentioned above, service trenches of a total length of 18,353 r. ft. were opened across roads.

154. The cost of road repair works done by the Road Branch for the several Municipal Departments (Water, Drainage, Health, Market, &c.) for public bodies and for private individuals (including the work done at the expense of house-owners for improvement of private streets) amounted to Rs. 2,12,034.

Road Materials.

155. The total quantity of road materials purchased during the year and their cost were as follows :—

Description of Materials.	Quantity in C. ft.	Cost. Rs.	a.	p.
Metal	11,41,045	89,857	4	9
Sand	3,11,945	26,515	5	3
Sandstone	3,17,706	24,026	8	3
Rubble stone	158,353	14,251	12	4
Kerbstones, table, stones khandkees, flag stones, &c. ...	...	14,289	5	3
Red hill earth	5,071	532	7	3
Total ...		1,69,472	11	1

Steam Rollers.

156. Two second hand steam rollers of 8 tons each were purchased from Messrs. John Fowler & Co., for a sum of Rs. 5,750.

157. One old 8-ton steam roller was condemned and sold as scrap in accordance with the Standing Committee's Resolution No. 2357, dated the 17th July 1912.

Widening Roads.

158. The work of widening Victoria Road for a distance of about 1,200 feet from Parel Road eastwards was completed during the year.

159. Mayo Road in front of the Royal Science Institute was widened to 100 feet, the land required for the widening being obtained from the Government free of cost.

160. The widening of the carriageway of Lansdowne Road by cutting down the footways by 5 feet on each side was in hand at the end of the year.

161. The widening and improvement of Worli Road from its junction with Fergusson Road, northwards, for a distance of about 2,500 feet was in progress at the end of the year.

162. Portions of Arthur Road from its junction with Bellasis Road to the junction with Gilder Street (now called Lamington Road) were widened to full width of 60 feet and footpaths were formed on either side thereof.

163. The Municipal private road leading from Arthur Road to Mahalaxmi Kachra sidings (called Approach Road) was widened from 30 to 60 feet for the convenience of the kachra cart traffic.

164. Roads taken over and declared public :—

Serial No.	Name of the Road.	Taken over from
1	Portion of Dongri Street from Carnac Bridge for 571 feet northwards	The City Improvement Trust.
2	Anantwadi Lane 468' × 15'	Under Section 306.
3	Passage to the north of Gowalia Tank Road and east of Dinshaw Petit Sanitarium 360' × 20'	Do.
4	Powwala Street (west and east) 320' × 40'	Do.
5	Kazi Syad Street from Bhandari Street northwards about 142 feet in length	The City Improvement Trust.
6	Bhandari Street between Jambli and Kazi Syad Street and east of Dongri Street to G. I. P. Railway premises	Do.

Improvement of Private Streets under Section 305 of the Act.

165. Legal action was taken against house-owners for the improvement of several private streets which were in an insanitary condition. In some cases house-owners concerned carried out the various improvements and lighting of the streets, through private agency, while in others, the necessary works were done by the Road Department at the expense of the house-owners. The following streets were dealt with :—

(1) Passages in Zaoba's Oart, Girgaum.

(2) 3rd Phophalwadi Lane, Bhuleshwar.

(3) Anantwadi do.

(4) Khanderaowadi do.

(5) Vithoba Lane off Vithalwadi.

(6) Telwadi off Vithalwadi.

(7) Lanes in Chikalwadi between Sleater Road and Tardeo Road.

(8) Cumballa Hotel Lane from Gowalia Tank Road to Warden Road.

(9) Lane off Gowalia Tank Road to the east of Parsi Sanitarium.

(10) Lanes in the Oart to the east of Mahalaxmi Station.

(11) Passage in Dhakji Parbhu's Oart, Ghorupdeo.

(12) Parel Cross Road to the west of Lower Parel Station.

Tarring Roads.

166. The extended use of tar for the treatment of roads has proved very beneficial. The road surfaces have been greatly improved and the life of the roads increased while the cleansing has been much reduced and considerable saving in road watering effected.

167. The quantity of tar used exceeded 100,000 gallons and the cost of tar painting and resurfacing amounted to Rs. 59,345.

168. The following important roads with a total area of 1,775,566 square feet were treated with tar :—

Wodehouse Road, Cooperage Road, Mayo Road, Queen's Road from Church Gate Station to Sandhurst Bridge, Church Gate Street, Lohar Street from Girgaum Road westward, Princess Street, Popatwadi Street, Apollo Bandar Road, Merewether Road, Adam Street, portion on Lamington Road, Carnegy Road, Willoughby Road, Cawasji Patel Street, Barber Lane, and Council Road.

169. The compounds of several Municipal buildings, mostly stables, were also treated with tar.

Footpaths.

170. The work of paving footpaths at Fort Street, Frere Road and Kittridge Road was completed by Messrs. Genuji Mudhaji and Co. during the early part of the year at a total cost of Rs. 8,482-12-0.

171. Out of the further grant of Rs. 10,000 sanctioned for paving footpaths in the Budget for 1912-13 portions of footpaths at the north end of Balaram Street were paved with Tandur slabs.

172. Portions of footpaths at Warden Road and Wodehouse Bridge approach were being tar-macadamised.

173. These works were being carried out departmentally and the certified expenditure thereon amounted to Rs. 3,912-14-3 at the close of the year.

174. The undermentioned petty works of forming new footpaths were also carried out departmentally during the year, and the cost thereof was met from the grant for Repairs and Maintenance of Roads and Footpaths :—

(1) On the Kennedy Bridge and its approaches on the south side thereof.

(2) On Kalbadevi Road in front of coppersmiths' shops for a distance of about 300 feet.

(3) On Chandanwadi Road on its north side for a length of 640 feet.

(4) On Babula Tank Road to the east of Drainage Office for a length of 125 feet.

(5) On Mori Road, Mahim, on both sides for a total distance of about 1,050 feet.

(6) On Carroll Road at the north end for a distance of about 275 feet.

(7) On Fergusson Road on both sides at the east end for a total length of about 1,100 feet.

(8) In front of the "Old Money School" now called "Mahamadi Mahal" for the whole length of the building.

(9) On Government Gate Road on east side for a distance of 2,200 feet.

(10) On Dadar Road on both sides for a total length of about 615 feet.

(11) On both sides of Haines Road from B. B. & C. I. Railway level-crossing to junction with Fergusson Road.

(12) All round the enclosure of the Queen's Statue, Esplanade Road.

Tree planting.

175. New trees were planted on Victoria, Connaught, DeLisle and Haines Roads during the year. For this purpose 200 iron tree-guards 2'-6" in diameter were purchased. The certified expenditure on the work up to the end of the year amounted to Rs. 3,941, the number of trees planted being 220.

Tramways.

176. No extension of tramways was carried out during the year. About 120 feet of rails were renewed on Byculla Bridge and an additional siding was laid on Foras Road leading into the Company's stables.

Government Triangulation Survey of Bombay.

177. Government Surveyors were engaged during the year on the topographical survey of the Island.

178. Every assistance was rendered to the Survey Party in connection with building of the survey stations and otherwise.

Road Watering.

179. The Budget grant for the work was Rs. 80,000. The total expenditure has amounted to Rs. 72,464-11-1.

180. With a view to reduce the amount of road watering and to admit of higher pressure being maintained in the water mains it was resolved to purchase 400 tons of Akonia for treating the road surfaces during the hot season, as this process proved very successful when used in December 1911 at the time of the King Emperor's Visit.

181. A grant of Rs. 40,000 was sanctioned for this purpose under the Corporation's Resolution No. 6263, dated the 3rd February 1913, and Akonia was being delivered at the end of the year by Mr. K. R. Vacha at the rate of Rs. 90 per ton.

New Hydrants fixed.

182. The total number of hydrants fixed during the year for road watering was 181. Out of these only 47 were of the standpost pattern, the others being underground.

G.

PUBLIC LIGHTING.

Gas Lighting.

183. The total number of gas lamps in the City at the end of the year was 5,508 as detailed in the following statement and the total cost of gas lighting was Rs. 3,59,899-3-4 :—

WARDS.	Upright C. Burner Lamps.					Inverted Lamps.			Inverted Mantle Ukay Lamps.				High Pressure Lamps.				Total.	REMARKS.
	Single Lights.	Double Lights.	Triple Lights.	Quadruple Lights.	Quintriple Lights.	Single Lights.	Double Lights.	Triple Lights.	Single Lights.	Double Lights.	Triple Lights.	Quadruple Lights.	High pressure lamps at Floral Fountain.	1,000 Candle power lamps at Chaupaty.	100 Candle power lamps at Sandhurst Road.	High pressure lamps with 6 burners at Fitzgerald column.		
A	1,030	16	3	8	5	6	135	2	19	..	3	1	8	..	..		1,458	
B	709	..	1	4	1	..	2	14	..	9	..	..	..	..	..	..	737	
C	673	..	1	..	..	..	35	13	..	..	..	..	..	..	..	..	785	
D	879	..	7	..	1	..	39	12	..	..	..	..	..	14	23	..	1,056	
E	963	4	2	..	..	..	..	1	..	..	..	..	..	..	..	..	969	
F	223	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	226	
G	206	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	206	
Total ..	4,683	16	45	48	35	6	424	126	19	18	9	4	8	14	23	6	5,508	
Number of lamps existing in 1911-12 ..	4,603	40	48	48	35	6	416	117	..	..	..	..	8	..	10	6	5,337	

Kerosine Oil Lighting.

184. As in the preceding years the kerosine oil lighting was carried out departmentally. The oil used was 125° Elephant Brand. The number of kerosine oil lamps in use was 1,778 as detailed below :—

Ward.	No. of lamps.	Remarks.
B	182	All these lamps have Simla pattern burners.
C	60	
D	97	
E	297	
F	559	
G	583	
Total ...	1,778	
No. of lamps in 1911-12 ...	1,833	

185. The total cost of kerosine oil lighting during the year was Rs. 33,934-11-1. Deducting from this Rs. 152-5-3, being the amount recovered on account of departmental bills for lighting health camps, &c., and (2) from private parties for breakage of lanterns, posts, &c., the net cost of kerosine oil lighting during the year amounted to Rs. 33,782-5-10, which gives a rate of Rs. 19 per lamp per annum.

H

MUNICIPAL WORKSHOPS.

186. The following are the particulars of expenditure incurred during the year for departmental and private works executed at the Municipal Workshops, for shop and supervision charges, tools and repairs to machinery, buildings, &c.:—

	Rs. a. p.	Rs. a. p.	Rs. a. p.
For Departmental Works, &c. :—			
Labour	76,558 13 1		
Stores	72,180 9 4		
Piece-work, cart-hire, &c.	832 5 0		
		1,49,571 11 5	
For Workshops Stores:—			
Labour	1,384 5 2		
Stores	4,214 11 7		
		5,599 0 9	
Total ...			1,55,170 12 2
For New Municipal Workshops :—			
Labour	105 2 0		
Stores	64 4 8		
		169 6 8	
			169 6 8
For Shop Charges:—			
Labour	2,788 3 4		
Stores	10,560 11 11		
Piece-work, contingencies, &c.	50 0 0		
		13,398 15 3	
For supervision charges, establishment, rent, &c.			
Establishment	12,855 15 2		
Rent paid to Government	13,142 1 0		
Contingencies	1,030 8 1		
		27,028 8 3	
Total Expenditure for working the Shops ...			40,427 7 6
Total Expenditure during 1912-13 was			1,95,767 10 4

	Rs. a. p.
The total expenditure during 1912-13 on account of Departmental Works, &c. (Rs. 1,49,571-11-5) for Workshops and Stores jobs (Rs. 5,599-0-9) and for fixing machinery, &c., in the first section of the New Municipal Workshops (Rs. 169-6-8) aggregated with the amount charged for supervision, tools, shops, and repair charges, &c. (Rs. 38,518-12-3) to	1,93,858 15 1
Add—Amount of incomplete jobs at the beginning of the year 1912-13	1,477 2 10
	Rs. 1,95,336 1 11
Deduct—Amount of incomplete jobs at the end of the year 1912-13 ... ... ,,	2,103 6 3
	Rs. 1,93,232 11 8
Deduct—The amount of experimental works charged against the shop charges, *viz.*, ,,	14 7 6
Profit and Loss Account.	
Thus—The total amount of bills preferred by the Workshops in the year 1912-13 was Rs. ...	1,93,218 4 2

Percentage for supervision, shop, repair charges, &c.

	Rs. a. p.	Rs. a. p.
The actual charges for the general working of the Shops (Rs. 13,398-15-3) and for rent and supervision (Rs. 27,028-8-3) amounted to		40,427 7 6
The amount recovered on account of the abovementioned expenses by charging the fixed percentage of 25 per cent. on the cost of labour employed and materials used for works executed at the shops was	37,392 15 0	
The difference between the actual cost of working the Municipal pumping engine, plus 25 per cent. for shop supervision, repairs, &c., and the fixed charges at which it was let on hire to private parties and departmental works was	1,125 13 3	
The amount realized by the sale of saw-dust, unserviceable articles, &c., was	4,912 8 5	
The balance in favour of the Workshops was therefore		2,393 13 2
Total Rupees ...	42,761 4 8	42,761 4 8

187. The following are the principal items of new works completed during the year :—

Description of Works.	Amount. Rs. a. p.
Making 4 offal carts for the Health Department	1,458 1 7
Converting 12 N. P. hydrants into 24 Hewett pattern hydrants	593 15 3
Do. 12 " 24 " do.	593 12 5
Do. 13 " 26 " do.	698 2 11
Reconstructing 4 meat vans for the Market Department	1,999 10 0
Erecting new moter refuse wagons No. 6, 7, 8, and 9 for the Health Department	645 10 11
Making 2 new meat vans for the Market Department	1,290 8 [illegible]
Repairing game birds enclosure, Acquatic birds cage, &c., in the Victoria Gardens	1,088 7 11
Making and fixing 20 benches at Wodehouse Bridge for the Road Department	587 4 4
Making and fixing a water tank in the Municipal Office for the Municipal Analyst	607 11 3
Making 26 road metal screens for the Road Department	1,137 15 8
Making booths, boards, boxes, &c, for the general election	3,538 5 6

188. Works completed which were commenced in the previous year :—

Description of Works.	Amount. Rs. a. p.
Erecting, screening and dredging machinery at the New Love Grove Pumping Station	1,742 6 2
Converting 9 N. P. hydrants into 18 Hewett pattern hydrants	401 7 11
Reconstructing 14 dust-bin carts to new pattern for the Health Department	3,258 14 6
Removing water tanks from the terrace over the Drainage Engineer's Office and refixing them over steel joists	521 0 1
Erecting 500 gallons ejectors and tubbing at No. 4 Ejector Station, Colaba, and removing old 300 gallons ejectors	1,667 2 3

189. The following are the principal items of new works which were in progress, but were not completed before the close of the year :—

Description of Works.	Estimated cost. Rs. a. p.	Expenditure up to 28th February 1913. Rs. a. p.
Making and fixing iron work for screening and dredging chambers at the New Love Grove Pumping Station	7,705 0 0	4,371 8 2
Fixing a railing round the compound wall of Sir Jacob Sassoon's property on the Victoria Road	1,800 0 0	774 6 6
Removing water tanks for the terrace over the retiring room of the Hydraulic Engineer and the Assessor and Collector and refixing them over steel joists	668 8 0	436 0 7
Making 20 hand barrows with cane receptacles for the Health Department	1,315 0 0	508 11 9
Reconstructing 30 dust-bin carts to new pattern for the Health Department	8,500 0 0	2,561 9 11
Making and fixing 5 canvas curtains in the corridor of the Municipal Commissioner's Office	525 0 0	845 5 11
Temporarily fixing electric generating plant at the Love Grove Pumping Station and fixing electric light fittings in the new screening and dredging house	5,118 0 0	918 7 3
Repairing 2 second hand steam rollers Nos. 29 and 30 for the Road Department	950 0 0	419 11 10

190. In addition to these works the Workshops have continued to keep in repairs the rolling stock of the Health, Road and Drainage Departments, the machinery of the Love Grove Pumping and Compressor Stations, the Colaba Compressor Station, the Ejector Stations in the Parel, Chinchpokli, Agripada, Malabar Hill, Mazagon, and Colaba Districts, Steam Rollers, Fire Engines, Motor Refuse Wagons, and Inspection Motor Cars.

191. Partly on account of the work carried out during the year being in excess of anticipations and partly on account of the Ratepayers' General Elections, the grants for extra and overtime labour and for stores, had to be supplemented during the year. The former grant was supplemented twice, 1st by an advance of Rs. 7,100 from the Surplus Cash Balance and transfer of Rs. 2,900 from the Permanent Labour grant sanctioned under the Corporation's Resolution No. 4043, dated the 14th October 1912, and again by a transfer of Rs. 1,500 from savings in the grant for Permanent Labour sanctioned under the Corporation's Resolution No. 7334, dated the 17th March 1913; while the latter was supplemented by an advance of Rs. 3,800 from Surplus Cash Balance.

192. In connection with the erection of new Workshops at Foras Road, the steelwork contract in the first section of the work was completed by Messrs. Geo. Gahagan & Co. on the 31st August 1912 at a total cost of Rs. 36,806-13-11.

193. Under the contract with Messrs. Fazulbhai Deoraj & Co. for the masonry work in the same section the contractors failed to complete the work within the contract period which expired on the 7th September 1912 and they were granted an extension up to the 31st

October 1912, on payment of the establishment charges. At the end of the latter period several petty items of works remained to be completed and the final bill was in consequence not submitted before the close of the year. The total certified expenditure up to the end of the year under this contract amounted to Rs. 43,503-14-4.

194. The Standing Committee under their Resolution No. 938, dated the 8th May 1912, accepted the tenders (*a*) of Messrs. Macbeth Bros. & Co. for the supply and erection of boilers, shafting and machinery, &c., in connection with the same work at a total cost of Rs. 18,081-0-0 and (*b*) of Messrs. Turner Hoare & Co. for the removal of a 25 H. P. compound engine from the Crawford Market compound, where it was previously in use for the electric lighting of the Crawford Markets and Municipal Office, and its re-erection at the new Workshops, together with a new condenser, steam piping, &c., at a total cost of Rs. 3,715-8-0. Messrs. Macbeth Bros. & Co. completed their contract, with the exception of the replacement of a grindstone trough which was received in damaged condition, on the 28th February 1913, and Messrs. Turner Hoare & Co.'s contract was completed on the 15th of the same month. The actual amount paid under the last mentioned contract was Rs. 3,567-8-0.

195. The plans and estimates for the second section of the new Workshops comprising fitting, erecting and machine shops, boiler and smiths shops, General and Timekeeper's Offices and Foreman's quarters, &c., were practically completed at the close of the year and tenders for the work will be shortly invited.

INSPECTION MOTOR CARS.

196. Motor cars Nos. 1674, 1675 and 1676 for the respective use of the Health Officer, the Deputy Executive Engineers and the Executive Engineer, were kept at the Bombay Motor Car Coy.'s garage until the end of August 1912 and were thereafter transferred to the new garage built for their reception at the Municipal Workshops.

197. A sum of Rs. 4,500 having been sanctioned in the Budget for 1912-13 for the purchase of a 2-seated car for the Mechanical Branch, tenders were invited for the supply and a 10-12 horse power 2-seated Vulcan Car was purchased from the Bombay Motor Car Co. at a cost of Rs. 4,485 in accordance with the Standing Committee's Resolution No. 7092, dated the 6th March 1912. The car was received on the 21st June 1912 and was allotted No. 2126.

198. The mileage run by the cars during the year was as follows :—

No.	1674	8,590	miles.
„	1675	7,732	„
„	1676	5,728	„
„	2126 from 21st June ...	2,860	„
	Total ...	24,910	miles.

199. The cost of maintenance, inclusive of establishment upto the close of the year was Rs. 8,289-11-6 which is equal to an average running cost of 5·32 annas per mile as compared with 5·07 annas per mile in 1911-12.

200. In consequence of the increased mileage of the cars the Budget grant of Rs. 4,000 for maintenance had to be supplemented by a transfer of Rs. 2,000 (*vide* the Standing Committee's Resolutions Nos. 5440, 5441 and 5442 of the 18th December 1912) and by a further transfer of Rs. 750 (*vide* the Standing Committee's Resolution No. 7116 of the 5th March 1913).

THE LOVE GROVE PUMPING STATION.

201. The engines and pumps worked fairly satisfactorily during the year with no total stoppage.

202. The efficiency of the pumps, as tested by frequent observations taken by the Drainage staff, showed an average of 83·5 per cent. as against an average of 87 per cent. in the previous year, 87 per cent. in 1910-11 and 89 per cent. in 1909-10. This drop in efficiency is not satisfactory and every endeavour is being made to improve it.

203. The combined total number of revolutions of all engines during the year was 82,243,135 against 27,081,063 in the preceding year.

204. The following table shows the total quantity of coal of different description consumed during the year with their average rates per ton:—

Description of coal.	Tons.	Average rate.
		Rs. a. p.
Powell's Duffryn Cardiff	466	40 12 10
Equitable Coal Coy.'s Desharghur	4,057½	16 9 9
Utretcht Natal...	282	22 10 11

205. The average rate per ton for all of these descriptions of coal was Rs. 19-4-4·6 as against an average rate of Rs. 16-7-0·6 in the previous year, and the average daily consumption was 13 tons, 3 cwts., 1 qr., 5·8 lbs. against 12 tons, 2 cwts., 3 qrs., 10·25 lbs. in 1911-12.

206. In consequence of the high rates ruling for coal and the extra consumption the grant for fuel had to be supplemented by transfers of Rs. 10,000 and Rs. 5,825 sanctioned under the Standing Committee's Resolution No. 4638 of the 14th November 1912 and No. 6753 of the 20th February 1913 respectively.

207. The repairs to No. 4 engine, which were in hand at the close of the previous year and included the renewal of the ram bushes of the sewage pumps and the returning of the rams were completed in September 1912. General repairs to No. 2 engine, which included the renewal of one low pressure steam cylinder, the reboring of the remaining cylinder, fitting new piston rods, pistons and rings to all cylinders, reboring air pumps and fitting new buckets, and renewing sewage pump rams, bushes and rods, were then taken in hand and were in progress at the close of the year.

208. The new low pressure cylinder mentioned above was purchased from Messrs. James Simpson & Co., the manufacturers of the engines, at a cost of Rs. 2,175 which was met from the grant for contingencies and stores.

209. 1,027 lbs. of "Turnorine" valve faces were purchased for the sewage pump valves from Messrs. Turner Hoare & Co., in June 1912 at a rate of Rs. 3-4-0 per lb.

210. 50 Cast steel pump valves with Delta metal spindles and 50 cast steel hinge-blocks for the same were also purchased from Messrs. John Fleming & Co., in May 1912 at a cost of Rs. 1,600 which was met from the above grant.

211. Progress continues to be made in connection with the supply and erection of new pumping machinery and plant for the station.

212. The superstructure of the engine house, the construction of which was entrusted to Messrs. Teju Kaya & Co., at an estimated cost of Rs. 77,357 in accordance with the Standing Committee's Resolution No. 7090, dated the 6th March 1912, was approaching completion at the close of the year. The contract for the supply and erection of the roof for the same building was entrusted to Messrs. George Gahagan & Co., at an estimated cost of Rs. 12,175 as per the Standing Committee's Resolution No. 343, dated the 17th April 1913, and the work was completed during the year.

213. The 15-ton travelling crane for the building was received from the Contractors, The Lilleshall Co., after the close of the monsoon, and the erection of the same was completed under the supervision of the Company's Resident Engineer, Mr. C. F. Simmonds, in December 1912.

214. The first large consignment of machinery consisting of the pump chambers, valve boxes and pipe connections, &c., was received early in January 1913 and was followed by two erectors from the Contractors works later in the same month, after which erection was commenced and the pump chambers were in progress of being bedded down to the foundation stones at the close of the year.

215. The contract for the new boiler house was given to Messrs. Teju Kaya & Co., at an estimated cost of Rs. 79,371-13-3 in accordance with the Standing Committee's Resolution No. 4975, dated the 27th November 1912, and the walls were nearly up to roof level at the

close of the year. The construction and erection of the roof was given to Messrs. Garlic & Co., at an estimated cost of Rs. 8,894-2-0 (*vide* the Standing Committee's Resolution No. 7105 dated the 5th March 1913).

216. The Babcock and Wilcox water tube boilers and the economiser of the new installation were received in February 1913 and their erection will be commenced as soon as the building is ready to receive them.

217. In the screening and dredging house the erection of the machinery by the Municipal Workshops was completed during the year at a total cost of Rs. 7,423-12-7 and the manufacture and erection of sundry ironwork in connection with the same work, which was also undertaken by the Workshops at an estimated cost of Rs. 17,120 was approaching completion at the close of the year.

218. The Corporation having sanctioned under their Resolution. No. 6,303, dated the 8th February 1912, an expenditure of Rs. 45,507 for the provision and temporary erection of generating plant for working the above machinery as well as other auxiliary electric motors in the old and new pumping stations and compressor station and for the electric lighting of all stations, tenders were invited for the supply of three 45 Kilowatt combined sets and switchboards and the tender of Messrs. Macbeth Bros. & Co., amounting to Rs. 20,460 for the supply of Messrs. Acworth & Parker's engines coupled to Messrs. Mather & Platt's generators and the necessary switchboards, &c., was accepted under the Standing Committee's Resolution No. 1314, dated the 29th May 1912. The sets were inspected and tested at the makers' works on behalf of the Municipality by the National Boiler and General Insurance Co., Ld., Manchester, at a charge of £36-15-0 and were duly received in March 1913.

219. Two second-hand locomotive boilers for temporarily working the above plant were purchased from the G. I. P. Railway Co., at a cost of Rs. 3,000 each to the debit of the grant for the work (*vide* the Standing Committee's Resolution No. 5103, dated the 4th December 1912) and their erection was completed by the Municipal workshops before the close of the year.

220. The Workshops also carried out and completed the installation of electric lights in the new screening and dredging house during the year.

221. It was noted in the last Annual Report that the scheme for the new low-level sea outfall at Love Grove had been referred to Sir John Wolfe Barry for opinion and that his report was under consideration at the close of that year. As Sir John's recommendations differed materially from any of the previous proposals opportunity was taken to refer the matter to Mr. G. Midgley Taylor at the time of visit to Bombay in June 1912.

222. Mr. Taylor's report, in which he confirmed the practicability of Sir John's proposals, was received at the end of October 1912, and both reports were submitted to the Corporation under Commissioner's No. 27000, dated the 17th December 1912.

223. The present proposals in brief are as follows :—

(*a*) That two lines of 6 ft. diameter cast iron pipe should be used for the sea portion of the outfall in place of the single 8 ft. diameter reinforced concrete pipe previously proposed.

(*b*) That the foundations and bedding of the pipes should be carried out in bag concrete as against Messrs. Lowther Kidd and Coy.'s scheme for the use of concrete blocks and the Local Committee of Engineers' recommedations that mass concrete should be used, and

(*c*) That a direct line should be adopted for the outfall in place of the deflected line previously proposed.

224. As the latter proposal necessitated fresh soundings being taken along the proposed new line, the Corporation under their Resolution No. 6637, dated the 13th February 1913, gave authority for arrangements being made with the Port Trust Staff to take soundings and prepare detailed sections and plans, and the work was in progress at the close of the year.

Colaba Compressor Station.

225. The machinery of the compressor station and the ejector stations served from it worked satisfactorily during the year.

226. The total quantity of sewage lifted during the year amounted approximately to 395½ million gallons against 398½ million gallons in 1911-12. The total number of revolutions run by the compressor engines was 41,969,627 against 43,514,549 in the previous year.

227. There were 22 interruptions in the electric supply to the meters during the year being 5 less than in 1911-12. Of these, 21 were stoppages of less than two hours' duration with an average of 27·1 minutes each. The remaining stoppage occurred on the 1st May 1912 at 4 p.m. and lasted for 3 hours and 20 minutes.

228. The total number of units of electrical energy consumed during the year was 299,540 against 300,432 units in 1911-12.

229. In consequence of the insufficiency of the grant for the above supply it was supplemented by a transfer of Rs. 1,765 (*vide* the Standing Committee's Resolution No. 5871, dated the 15th January 1913).

230. A, engine was stopped from the 4th to the 8th May 1912 for returning the motor commutator and during this period the reserve steam engine was worked and consumed a total of 6 tons, 4½ cwts. of coal.

231. As the station has now been worked for two full years by electric power a fair comparison can be made between the cost of previous working by steam and the present method. The results are as follows :—

System.	Year.	Total cost of working the station.	Total gallons lifted.	Cost per gallons lifted in annas.
Steam	1908-09	Rs. 30,434 10 9	407,500,000	1·19
Do.	1909-10	„ 26,226 5 8	436,250,000	0·96
	1910-11	Plant under conversion.		
Electric	1911-12	Rs. 33,496 6 2	398,500,000	1·34
Do.	1912-13	„ 34,156 11 4	395,503,000	1·38

232. This shows an average cost of 1·08 annas per 1,000 gallons lifted during the last two years under steam against an average cost of 1·36 annas for the past two years under electric power, the increase being equal to 25 per cent. At the present high rates ruling for coal the cost of working by steam would be considerably greater than in the past so that the percentage of increase consequent upon the conversion is more apparent than real, and in consideration of the fact that the station is now worked without smoke or nuisance it is not an excessive amount to pay for the improvement.

233. The work of erecting the pair of 500 gallon ejectors (removed from No. 3 Station) in a new station in No. 4 district to replace the old 300 gallon ejectors which was in hand at the close of the previous year, was completed by the Municipal Workshops in June 1912, and the ejectors were started on the 7th of the same month.

234. On the removal of the old ejectors, which it was intended should be used to replace the pair of 100 gallon ejectors in No. 5 station, it was found that they were so corroded by the action of sea water as to be unfit for further use and the Standing Committee under their Resolution No. 5102, dated the 4th December 1912, sanctioned the purchase of the new pair of 250 gallons ejector from Messrs. Hughes and Lancaster at a cost of Rs. 7,215 C. I. F. Bombay. These ejectors were not received before the close of the year.

235. There was one fracture of the air main connecting the ejector stations with the compressor station during the year. This occurred to the 5" main on Colaba Road near the Sassoon Dock Tram Terminus on the 16th April 1912 and involved the stoppage of Nos. 3, 4 and 5 ejector stations for 4 hours for the replacement of the broken pipe.

THE LOVE GROVE COMPRESSOR STATION.

236. The machinery of the compressor station and the several ejector stations in the Parel, Chinchpokli, Agripada, Malabar Hill and Mazagon Districts, worked satisfactorily during the year.

237. The combined total number of revolutions run by Nos. 1 and 2 (large) compressor engines during the year was 29,969,314. The revolutions of Nos. 3 and 4 (small) engines

amounted to 28,118,987 during the same period. The previous year's totals were 35,886,264 and 18,674,451, respectively. The small engines are half the capacity of the large, so that the net decrease in revolutions during the year on the basis of a large engine as compared with the previous year was 1,194,682.

238. The total quantity of sewage lifted by the ejectors worked from the station during the 12 months was approximately as follows :—

Ejector Station.	Quantity of sewage lifted in gallons.
No. 1 Fergusson District, DeLisle Road	492,010,000
No. 2 Do. Arthur Road	455,740,400
No. 1 Parel District, Elphinstone Road	169,695,000
No. 2 Do. Chinchpokli Road	117,180,000
No. 3 Do. Sewri Road	47,271,000
No. 1 Mazagon District, Church Street	182,497,000
No. 2 Do. Tank Bunder	60,150,500
No. 1 Agripada District }	52,833,150
No. 2 Do. }	
No. 1 Malabar Hill District, Warden Road	40,578,000
No. 2 Do. do. Nepean Sea Road	30,451,100
No. 3 Do. do. Gamdevi Road	23,446,800
Total Gallons ...	1,669,852,950

239. The above total shows an increase of 79,393,400 gallons on the total for the previous year.

240. 2,813½ tons of Ramnagore screened rubble coal were purchased for the station during the year at an average rate of Rs. 15-13-10·8 per ton against Rs. 15-5-9·7 in the previous year. The average daily consumption was 7 tons 14 cwts, 0 qr., 20 lbs. against 8 tons 3 cwts. 3 qrs., 20·7 lbs. in 1911-1912. The reduced consumption was principally due to the good quality of the coal.

241. The work of fitting new Walker's air cylinder and valves to No. 3 (small) engine, which was in hand at the close of the previous year was completed in June 1912 and the engine has since worked very satisfactorily.

242. Under their Resolution No. 3116, dated the 21st August 1912, the Standing Committee accepted the tender of Messrs. Macbeth Bros. & Co., amounting to Rs. 6,308 for the supply of 3 sets of Walker's air cylinders and valves required to replace the existing cylinders in No. 4 (small) engine. The new parts were received at the end of February 1913, and the work of fitting them to the engin was thereupon taken in hand.

243. On the evening of the 13th June 1912 there was a serious slip, caused by heavy rain, in a drainage trench excavated on Clerk Road, which carried away three lengths of the 12 inch air main serving the ejector stations in the Mazagon and Agripada Districts and in Chinchpokli and Sewri Roads. The repairs were at once taken in hand by the Water Works Department and the main was restored by 4·45 the following morning without any serious results.

244. On the afternoon of the 19th October 1912 a burst occurred in the 15 inch sealed sewage main in Fergusson Road serving the ejector station in the same road. The services of Water Works Department Staff were again requisitioned and a new pipe was put in place by 7 a.m. the following day. It was found that the old pipe had burst owing to a deep groove at the bottom caused by the passage of silt and as the pipes on either side of the renewed length were similarly grooved it is feared that extensive renewals will shortly be necessary.

245. There were several leaks during the year in the 6 inch steel sealed sewage main serving the ejector station in Nepean Sea Road owing to the pipes having corroded through at the sockets and it was necessary in January 1913 to lay twelve lengths of cast iron pipe in replacement.

I

GENERAL.

Important subjects reported upon.

246. The following is a list of important subjects which were reported upon during the year:—

1. Overhead Railway.
2. Construction of roads from Wari Bunder to Dockyard.
3. Construction of a road from Matunga, B. B. & C. I. Railway Station to Mahim Bazar Road.
4. Extending " Chaupati Parade " Southward up to Thakurdwar Road.
5. Laying out roads and parks in the northern part of the Island.
6. Providing roads from East to West to allow easy entry from Siwri Reclamation ground to the town.
7. Laying out a new 60 feet road from Sion to Mahim Causeway.
8. Forming Western Avenue from Byculla Bridge to Mahim Causeway.
9. Widening of Waudby Road.
10. Widening of Mayo Road.
11. Widening of Reay Road to 90 feet.
12. Widening and improving Dharavi Road.
13. Providing footpaths on Girgaum Road.
14. Tarring road surfaces.
15. Laying down dust by Akonia.
16. Proposed use of sea water for watering roads.
17. Provision of benches in streets.
18. Purchase of roads sweeping machine.
19. Purchase of tar spraying machine.
20. Purchase of stone-breaking machine.
21. Numerous set-backs throughout the City.
22. General policy as regards set-backs.
23. Prescribing new or altered regular lines at the undermentioned places :—
    - Parel Village Road.
    - Mount Road between Victoria Road to Love Lane.
    - Purbhadevi Road between Elphinstone Road to Old Purbhadevi Road.
    - Tulsi Pipe Line Road between Elphinstone Road to Dadar Road.
    - Thakurdwar Road near its junction with Girgaum Road.
    - Colaba and Lansdowne Road Junction.
    - Mazagon Road between Wadi Bunder to Matarpakhadi Road.
    - Mahim Bazar Road between Purbhadevi Road to Lady Jamshedji Road.
    - Gowalia Tank Road between Tardeo Road to Gowalia Tank Road.
    - 1st Umarkhadi Road.
    - Rose Cottage Lane.
    - Harkness Road.
    - Girgaum Road from Charni Road to Bhatwadi Nesbit Bridge.
    - Tulsi Pipe Line Road from Haines Road to Carrol Road.
    - Bhoiwada Road.
    - Mahaluxmi Road.
    - DeLisle Road.
    - Masjid Bunder Road between Kambekar Street to Doongri Street.
    - Parel Government Gate Road.
    - Clare Road.
    - Dalal Street.
    - Bhuleshwar Road between Cathedral Street to 3rd Bhoiwada Street.
    - Love Lane between Mount Road to Parel Road.
    - Imamwada Road between Old Nagpada Street to Jail Road, North.
24. Constructing an Overbridge in Victoria Road and widening the road.
25. Altering levels of Victoria Road and Mount Road.

26. Improvement and widening of Bombay Agra Road including Sion Overbridge.
27. Widening of Kennedy Overbridge.
28. Widening of Hancock Bridge.
29. Widening and alteration of level of Worli Road.
30. Alignment of Dadar Overbridge.
31. Marine Lines Overbridge.
32. Improving the lighting of Erskine Road Market.
33. General question of improving the lighting of markets.
34. Lighting the Victoria Garden Tower.
35. Improvement in the lighting of the northern part of the town.
36. Providing central suspension lamps in streets 40 feet wide or of less width.
37. Introducing high pressure gas lights at Chaupati and at Walkeswar and at Sandhurst Bridge.
38. General question of lighting a portion of the southern part of the town with high pressure lamps.
39. Reclamation of Gowalia Tank and the utilization of the reclaimed land as a recreation ground.
40. Extension of Sewri Cemetery.
41. Hanging Garden at Chaupati.
42. Improvement of "Bhatia Baug."
43. Selection of sites for Chaupati Market.
44. Selecting a site for the Statue of the late Mr. Nasarwanji Maneckji Petit.
45. Disposing of town refuse and carcasses by incinerators.
46. Electric power tarrif.
47. Collapse of a chal at Parel Cross Lane.
48. Revision of schedule of different establishments in the Executive Engineer's Department.
49. Revision of list of Municipal properties.
50. Selection of a site for a N. S. Depôt and provision of conveniences near the Sandhurst Bridge.
51. Measures for preventing stagnation of water in the Low Level Channel, Worli.
52. Provision of pumps at the Worli storm-water outfall.
53. Diversion of the storm-water channel from Love Grove into the Low Level Channel.
54. Proposed new outfall at Love Grove.
55. Remarks on Mr. G. Midgley Taylor's Report on the effect of the duplication of Tansa Main upon the existing drainage system.
56. Removal of the Tramway sidings from the south of the Museum plot and rounding of the corner of the Museum on the east side and providing new sidings on Hornby Road, and Customs House Road.
57. Proposed wharf for Cleveland Bundar.
58. Primary Schools at the Junction of Morland Road and Sankli Street, Ardeshar Dadi Street, Worli, Babula Tank and Kazi Sayed Street.
59. New Municipal Workshops.
60. Sick Bullock Hospital at Sankli Street.
61. Fire Brigade Station at Elphinstone Bridge Road.
62. Quarters for bigaries at Deonar.
63. Offices for D Ward Building and Lighting Inspectors and quarters for Sluicemen at Gowalia Tank.
64. Bathing places in the City.
65. Construction of shops on the southern and western frontages of the Arthur Crawford Market.
66. Extension of the Arthur Crawford Market.
67. Construction of stables for bullocks and chals for bigaries at Annesly Road, Mahim, Jail Road, Kamatipura and Arthur Road.
68. Construction of chals for hulalkhors at Tardeo Flat.

69. Extension of Dhobiwada at Mahalaxmi.
70. Slaughter House at De Lisle Road Sheep Market.
71. Pig Slaughter House at Pedder Market.
72. Parrot and Cockatoo House at the Victoria Gardens.
73. Overseer's quarters in the Victoria Gardens.
74. Quarters for Water Works Office at Babula Tank.
75. Boundary wall and barbed wire fence at the Haines Road Cemetery.
76. Filling in a portion of the Haines Road Cemetery.
77. Wall for protecting the Mahim Burial and Burning Ground.
78. Fountain at Cruickshank Road.
79. Fountain at Chaupati.
80. Amendment of the Municipal Act and Building Bye-laws.

BILLS, VOUCHERS, &c., RECEIVED AND PASSED.

247. Comparative statement of the number of bills, vouchers, &c., received, examined and passed during the five years from 1908-09 to 1912-13 :—

Description.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
Bills for Supplies, Works, &c.	28,790	25,275	24,691	20,821	21,681
Departmental Works Bills	6,360	5,468	5,783	3,691	3,310
Private Works Bills	2,654	3,349	3,121	2,469	2,687
Total ...	37,804	34,092	33,595	26,981	27,628

NOTICES, &c., ISSUED.

248. Comparative statement of the number of notices, &c., issued during the five years from 1908-09 to 1912-13 :—

Section of the Municipal Act.	Description.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
	Street and Building Branch.					
231	To provide rain-water eaves, gutters and down-take pipes	169	329	1,784	1,018	487
247	To provide water-closets, privies or urinals ...	4	7	1	1	...
257	To remove encroachments on drain, cesspool, house-gully, privy, urinal, &c.	2	1	...	...	...
299	Intimation to take possession of land outside building for street improvement	68	100	79	109	158
305	To level, metal or pave, drain and light private streets	111	82	87	103	42
308	To remove new projections	180	362	1,004	1,290	869
308-309	To remove new projections as well as old ones ...	11	8	52	45	15
311	To remove or alter door, or gate, bar or window opening upon a street	8	11	20	12	11
313 (5)	To remove any board or shelf within a height of 12 feet from the surface of the street	...	...	24	20	5
329	To repair, protect or enclose wells or dangerous places	11	16	23	21	12
349	To remove inflammable materials in external walls and roof covering	218	173	268	248	186
351	To remove, alter or pull down structures erected without Municipal approval or to submit plans for the same	13	19	30	33	29
353	To alter buildings erected or to amend works done contrary to the provisions of the Municipal Act or Building Bye-laws	237	261	361	348	380
354	To pull down ruinous houses	364	342	450	274	523
354-A	To remove persons directing works unlawfully carried on	...	...	75	82	264
380	Removing or altering insanitary huts or sheds ...	631	787	592	602	349
383	To cut and trim trees, shrubs and hedges... ...	2	3	6	3	5
488	Intimation of intention to enter houses after 24 hours' notice	1,997	2,211	1,427	1,668	1,163
351 (2)	Intimation of intention to enter houses after 48 hours' notice...	4	8	14	24	10
298 (2)	Intimation of intention to take possession of land occupied by buildings, &c.	4	3	...	3	9
Bye-law 48	Infringement of the provision of the Building Bye-laws	1	2	12	3	1
Section I of Government Modification No. 228-P, 10th February 1897.	To prohibit further use of building as a dwelling..	...	...	25	7	...
	Total ...	3,135	4,916	6,329	5,909	4,518

Section of the Municipal Act.	Description.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
	Drainage Ordinary Works.					
222	For laying Municipal drains through or under lands belonging to private parties	12	3	5	2	11
230	To carry drains through land belonging to other persons	21	13	20	10	8
231	To drain undrained premises within a hundred feet of a Municipal drain	721	711	623	788	701
232	To drain undrained premises not within a hundred feet of a Municipal drain	318	373	443	267	51
238	To declare joint ownership of a drain	8	5	8	5	2
240	To pass or construct a drain beneath any part of a building	12	...	...	...	...
243	To raise vent-pipes on the drain	...	31	27	14	19
244	To affix shafts or pipes or ventilation of drains, &c.	18	9	15	10	31
257	To renew, repair, &c., drainage of houses	723	817	958	1,130	975
258	To prohibit contraventions generally of the provisions of Chapter IX of the Municipal Act ...	6	...	1	1	...
488	Entering premises for purpose of surveying, &c. ...	1	...	...	...	...
...	Drainage of waste water from bleaching and dyeing works	...	...	...	87	...
	Total ...	1,840	1,962	2,100	2,264	1,798
	Drainage Loan Works.					
222	For the acquisition of land for making drains ...	6	...	...	...	...

SUMMARY.

Departments.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
Streets and Buildings Branch	3,135	4,916	6,329	5,909	4,518
Drainage Ordinary Works	1,840	1,962	2,100	2,264	1,798
Drainage Loan Works	6	.....	.....	.....	.....
Total ...	4,981	6,878	8,429	8,173	6,316

LETTERS, &c., RECEIVED AND DESPATCHED.

249. Comparative statement of the number of letters, references to Inspectors, &c., received and despatched during the five years from 1908-09 to 1912-13 :—

Departments.		1908-09.	1909-10.	1910-11.	1911-12.	1912-13.
General and Street and Building Branches...	Inward ...	148,992	178,359	179,522	178,121	164,472
	Outward...	145,581	179,764	188,072	180,169	169,458
Drainage Ordinary Works	Inward ...	45,455	53,499	54,001	54,798	54,119
	Outward...	39,635	38,788	37,134	35,842	36,113
Drainage Loan Works	Inward ...	2,188	2,158	.....	.....	.....
	Outward...	2,245	2,394	.....	.....	.....
Total ...		384,091	449,962	458,729	448,930	424,162

250. The following is a *summary of clerical work done by the different branches* of the Department during the year :—

Consecutive No.	Description of Work.	General and Street and Building Branches.	Mechanical Branch.	Drainage Ordinary Works.	Total.
1	Letters, &c., received including replies to references to Inspectors, &c.	164,472	5,196	54,119	223,787
2	Letters, &c., despatched, including references to Inspectors for report	169,458	5,973	36,113	211,544
3	Notices issued	4,518	.....	1,798	6,316
4	Summonses issued	1,314	.....	602	1,916
5	Contracts for annual and other supplies and for the construction of various works executed	34	.....	4	38
6	Leases of various rights sold	23	.....	.....	23
7	Vouchers received and passed	12,651	734	8,246	21,631
8	References made to Inspectors, &c., for certificates on vouchers	4,806	.....	3,936	8,742
9	Reports and certificates received from the Inspectors, &c.	4,802	.....	3,936	8,738
10	Departmental and private works bills prepared or received, checked and passed	4,366	1,221	410	5,997
11	Statement of works done for private parties checked and passed	85	.....	.....	85
12	Statement of works done for Municipal Departments checked and passed	88	.....	.....	88
13	Workshops balance sheets prepared and forwarded	12	.....	.....	12
14	Statements of recovery of bills against private parties received	77	.....	.....	77
15	Requisitions prepared or received and forwarded	2,414	10,256	2,318	14,988
16	Measurement slips for metal, sand, rubble, &c., received and checked	795	.....	.....	795
17	Morning and material reports, diaries, &c., prepared or received and checked	5,110	.....	.....	5,110
18	Muster Rolls received and checked	561	.....	.....	561
19	Statements of wages remaining unclaimed received and checked	106	.....	.....	106
20	Unclaimed wages, refund certificates prepared or received and passed	1,791	.....	.....	1,791
21	Work abstracts for road repairs and maintenance received and checked	84	.....	.....	84
22	Work abstracts for road watering received and checked	84	.....	.....	84
23	Permits issued for projecting verandahs, balconies, rewas, weather-frames, &c.	105	.....	.....	105
24	Permits issued for erection of scaffolding on public roads	606	.....	.....	606
25	Permits issued for opening road	1,577	.....	.....	1,577
26	Permits issued for temporary occupation of public streets on marriage and other ceremonies	623	.....	.....	623
27	Advice notes for sale of tender forms, rights of cutting grass, hire of steam-rollers, carts, ground-rent, sale of building forms under Sections 337 and 342, supplying copies of office records, &c., prepared and forwarded to the Chief Accountant	2,984	.....	358	3,342
28	Licenses issued to Plumbers	125	.....	.....	125
29	Licenses issued to Surveyors	57	.....	.....	57
30	Authorities issued to Plumbers for opening roads under tram lines	59	.....	.....	59
31	Orders issued for adding ground	46	.....	.....	46
32	Permits for building or rebuilding houses granted either conditionally or unconditionally	3,618	.....	.....	3,618
33	Claims for compensation for lands, &c., taken up for street improvement passed	162	.....	.....	162
34	Number of road slips prepared and checked	75,555	.....	.....	75,555

WORKS IN CONNECTION WITH PLAGUE MEASURES.

251. The latrines, nahanis and water connections at the different private Health Camps at Dadar and Matunga were provided by the Municipality.

252. The following camps were erected and provided with latrines, standpipes for water-supply and lighting arrangements at Municipal expense :—

		No. of Rooms.
	On Municipal Ground at—	
1.	Babula Tank	40
2.	Gilder Tank	50
3.	Mahim Garden	50
4.	DeLisle Road next to Night-soil Depôt (or Purbhadevi)	75
	On Private Land at—	
1.	Victoria Bundar (belonging to the Colaba Land and Mill Company, Ltd.)	26
	On Improvement Trust Land at—	
1.	Agripada Estate	100
2.	Government House Compound, Parel (belonging to Bombay Presidency King Edward Memorial) ...	75
	Total No. of Rooms ...	416

253. The total cost of erecting temporary bamboo matting huts amounted to Rs. 4,030.

254. The Health Camps which existed at the undermentioned places in the previous years were maintained at Municipal expense during the year :—

		No. of Rooms.
1.	Babula Tank	16
2.	Northbrook Garden	46
3.	Mahim Station	30
4.	Arthur Road	72
5.	At the Junction of Arthur Road and DeLisle Road ...	100
	On Government Land at—	
1.	1st Koli Lane, Colaba	20
	Total No. of Rooms ...	284

255. The total cost of maintaining these camps amounted to Rs. 1,815.

MUNICIPAL SERVANTS' ACT.

256. No circumstance has arisen in this department during the year to necessitate the putting of the Municipal Servants' Act into operation.

I have the honour to be,
Sir,
Your most obedient servant,

JAMES W. MACKISON, B. Sc., M. Inst. C. E.,
Executive Engineer.

J.

WATER WORKS.

Tansa Lake.

The total rainfall for the year, measured near the outlet from the Lake, was 88·12 inches or 3 per cent. below the average for the preceding five years, the rainfall for the preceding five years being—

96·98	inches in	1907
90·18	„	1908
102·19	„	1909
97·20	„	1910
69·23	„	1911

Rain fell on 90 different days, and exceeded 4 inches per day on three occasions, the largest fall, *viz.*, 7·85 inches was on 20th July 1912. On 25 days the rainfall ranged from 1 to 3½ inches.

The first rainfall occurred on 29th May 1912, but the monsoon regularly set in on 12th June, and from that date up to 10th September there was continual rainfall, after which there were occasional showers till 22nd November 1912, and when the monsoon finally ceased, 67,174 million gallons had fallen on the catchment area of 33,600 acres, and of this quantity 39,671 million gallons or about 58 per cent. of the total rainfall was received in the Lake.

The Lake commenced to overflow on 21st July, when the rainfall amounted to 47·69 inches and continued to overflow until 8th September. The total quantity of water that passed over the waste weir was about 28,522 million gallons or about 73 per cent. of the quantity received in the Lake.

The quantity of water delivered into the duct at the Lake was about 7,023 million gallons for the year, of which about 6,258 million gallons were received in the City. The balance, 765 million gallons being lost by evaporation, overflow from siphon heads and leakage, along the duct.

The quantity of water lost from the Lake through evaporation, supply, leakage and absorption between 1st April 1912 and 31st May 1912 was 2,192 million gallons and between 1st December 1912 and 31st March 1913 was 4,031 million gallons, making a total loss of 6,223 million gallons for 182 days, or an average of 34·2 million gallons per day.

The loss of water by evaporation from the Lake averaged, during the dry months, 16·35 million gallons per day. The observed monthly evaporation being as follows :—

8·07	inches	during	April 1912.
7·04	„	„	May „
6·02	„	„	December 1912.
6·01	„	„	January 1913.
5·07	„	„	February „
7·09	„	„	March „

The lowest depth to which the water in the Lake was drawn was 394·41 feet above T. H. D., leaving 14·41 feet or 9,406 million gallons available for consumption above the level of the lowest outlet.

All the visible leaks in the aqueduct between Tansa and Ghatkopar were measured during the year, the total leakage found amounting to ·81 million gallons per day. Practically all the visible leaks in the duct between Pokran and Ghatkopar were repaired during the year resulting in a saving of ·96 million gallons per day. It may be pointed out that there is a printer's error in last year's report in para 9 the amount of leakage being 1·77 not 1·17 million gallons per day.

There were three bursts on the Tansa main during the year under reference, all of which were repaired promptly.

The purity of water in the Lake has been satisfactorily maintained. The following are the results of analyses of samples of water taken from the Lake from time to time during the year :—

Date of Analysis.	Grains per gallon.		Parts per million.		Nitrites.	Remarks.
	Total solids.	Chlorine.	Free Ammonia.	Albd. Ammonia.		
April 1912	7·00	·5	·016	·132	*Nil.*	
July ,, ...	7·00	·6	*Nil.*	·08	*Nil.*	
October ,, ...	8·00	·7	*Nil.*	·076	*Nil.*	
January 1913	9·00	·8	*Nil.*	·124	*Nil.*	

Vehar Lake.

The total rainfall for the year was 69·55 inches, or about 16·6 per cent. below the average for the preceding five years, the rainfall for the preceding five years being—

88·51 inches in 1907
76·54 ,, ,, 1908
114·26 ,, ,, 1909
77·50 ,, ,, 1910
60·27 ,, ,, 1911

Rain fell on 93 different days mostly in small showers, but exceeded 3 inches per day on 7 occasions. On 15 days the rainfall varied from 1 to 2½ inches.

The total rainfall on the catchment area of 3,900 acres amounted to 6,154 million gallons and 55 per cent. of this quantity or 3,384 million gallons was received into the Lake.

The Lake did not overflow during the year, the highest level attained being 249·75 feet above T.H.D. or 14·75 feet below the waste weir and 19·25 feet above the lowest outlet.

Owing to the low level of water in the lake, the curtailment of the supply from this Lake to the extent of 3½ million gallons per day brought into effect on 7th November 1911 was continued throughout the year.

The total quantity of water lost by evaporation, supply, absorption and leakage from the Vehar Lake between 1st April and 31st May 1912 was 709 million gallons and between 1st December 1912 and 31st March 1913, 1,436 million gallons, making a total of 2,145 million gallons for 182 days, or an average of 11·8 million gallons per day.

The total quantity of water received in the City during the year by the 32″ and 24″ diameter mains from the Lake was 2,868 million gallons, making an average of 7·8 million gallons per day.

The loss of water by evaporation from the Lake averaged 2·44 million gallons per day, the observed monthly evaporation being—

5·00 inches during April 1912.
5·80 ,, ,, May ,,
3·10 ,, ,, December ,,
3·10 ,, ,, January 1913.
2·70 ,, ,, February ,,
3·00 ,, ,, March ,,

The lowest depth to which the water in the Lake was drawn before the break of the monsoon of 1912, was 238·75 feet above T. H. D., leaving only an available depth in the Lake of 8·25 feet or 1,565 million gallons for future supply.

There were 6 bursts on the 32" main during the year.

The purity of this water has been well maintained, notwithstanding the low level of the lake. The following statement shows the results of analyses made at different periods of the year under report :—

Date of Analysis.	Grains per gallon.		Parts per million.		Nitrites.	Remarks.
	Total solids.	Chlorine.	Free Ammonia.	Albd. Ammonia.		
April 1912	10·00	1·1	*Nil*	·22	*Nil*	
July ,, ...	7·00	·9	*Nil*	·27	*Nil*	
October ,, ...	8·00	·9	*Nil*	·148	*Nil*	
January 1913	8·00	·9	*Nil*	·206	*Nil*	

Tulsi Lake.

The total rainfall for the year at Tulsi was 77·25 inches or 24 per cent. below the average for the preceding five years, the rainfall for the preceding five years being—

119·51	inches in	1907.
101·96	,,	1908.
127·21	,,	1909.
84·36	,,	1910.
70·35	,,	1911.

Rain fell on 90 different days and exceeded 4 inches per day on 3 occasions. On 24 days it ranged from 1 to 3·64 inches per day.

The total rainfall on the catchment area of 1,700 acres amounted to 2,979 million gallons and it is estimated that 62 per cent. of this quantity or 1,859 million gallons was received in the Lake.

The lake did not overflow during the year, the highest level reached being 454·98 feet above T. H. D. on 8th September 1912, when the total rainfall amounted to 72·87 inches.

The total quantity of water lost from the Lake by evaporation, supply, leakage and absorption between 1st April and 31st May 1912 was 299 million gallons, and between 1st December 1912 and 31st March 1913 was 628 million gallons, making a total of 927 million gallons for 182 days, or an average of 5·1 million gallons per day.

The total quantity received in the City was 1,216 million gallons, or an average of 3·3 million gallons per day.

The average loss of water by evaporation from the Lake was ·61 million gallons, the following being the observed monthly evaporation :—

6·00	inches	during	April	1912.
6·00	,,	,,	May	,,
3·10	,,	,,	December	,,
3·10	,,	,,	January	1913.
2·70	,,	,,	February	,,
3·00	,,	,,	March	,,

The lowest level to which the water in the Lake was drawn before the break of the monsoon of 1912 was 434·68 feet above T. H. D., leaving 21·82 feet or 740 million gallons in the lake for future supply.

The following table shows the results of analyses of the water in the Lake at various periods of the year :—

Date of Analysis.	Grains per gallon.		Parts per million.		Nitrites.	Remarks.
	Total solids.	Chlorine.	Free Ammonia.	Albd. Ammonia.		
April 1912	9·00	·1	·018	·216	*Nil*	
July ,, ...	8·00	1·00	·008	·218	*Nil*	
October ,, ...	7·00	·9	*Nil*	·12	*Nil*	
January 1913	6·00	1·00	·016	·238	*Nil*	

There were no bursts, accident or interruptions in the supply from Tulsi during the year.

RESERVOIRS AND FILTERS.

The work of water-proofing the Reservoirs and Filters at Malabar Hill was commenced on 13th July 1911 and was continued during the year with satisfactory results. The four original filter beds have now been thoroughly repaired and brought into use. The two reservoirs were also taken in hand during the year and the work of water-proofing No. 2 Reservoir has been entirely completed, while satisfactory progress has been made with No. 1 Reservoir which is expected to be ready for use by the end of June 1913. The work executed in these Reservoirs consists of plastering the entire face of the surrounding walls with Portland Cement 1" thick laid on in two coats after the joints of the masonry have been raked out to a depth of 1½ inches and the face of the walls and joints thoroughly cleaned. The vaults under the four original filters are now being treated in this manner and also the floor of Reservoir No. 1.

Owing to Reservoirs Nos. 1 and 2 being thrown out of use alternatively for carrying out these works, it became necessary to draw the whole of the supply to the Colaba, Fort and Girgaum Districts through only one or other of the two outlet mains. This caused a slight fall in the pressures in these districts, but on the whole a satisfactory and uninterrupted supply has been maintained; and in localities where serious complaints arose, special arrangements were made to improve the supplies by extending the same from other sources.

The Filters and Reservoirs at Bhandarwada were in regular use throughout the year, but owing to the curtailment of the Vehar supply and the increasing demands of the city, some difficulty was experienced in maintaining a sufficient reserve storage of water in these Reservoirs to meet requirements for fire and other emergencies. There is now no measurable or visible leakage from these reservoirs and filters.

The filter beds at Vehar were not used during the year, as the height of water in the Vehar Lake at the close of the monsoon of 1912 was not sufficient to deliver it at the filters. The whole of the supply through the 24" main was therefore distributed unfiltered to the northern portion of the Island.

DISTRIBUTION WORKS.

Works in connection with the renewing, enlarging existing water mains and laying additional mains have been continued during the year, 8·07 miles of new pipes having been laid. The following table shows the sizes and lengths of various water mains laid during the year:—

Ward.	Locality.	Size of old main.	Size of new main.	Length of new main in lineal feet.	Remarks.
A	Agiary Lane	3″	3″	190	
	Bazar Gate Street	...	5″	1,315	
	Borah Bazar Street... ...	3″	6″	205	
	Do.	3″	3″	380	
	Bombay Exhibition ...	5″	5″	340	Laid temporarily.
	Bomanji Lane	...	3″	10	
	Church Gate Street ...	8″	6″	175	Additional main.
	Do.	7″	6″	55	Do.
	Do.	6″	6″	25	Do.
	Do.	...	6″	20	
	Colaba Road	...	6″	40	
	Connon Road	...	6″	12	
	Elphinstone Circle	3″	5″	485	
	Do.	5″	5″	35	
	Frere Road	...	9″	655	
	Gun Carriage Street ...	...	4″	595	
	Homji Street	...	5″	30	
	Nowreji Road	..	4″	175	
	Thomas Street	..	7″	200	
B	Bhandari Street	3″	5″	460	
	Bhajipala Street	..	6″	786	
	Bibijan Street	..	5″	589	
	Carnac Road	...	15″	770	
	Do.	...	3″	555	
	Do.	...	9″	770	
	DeSouza Street	...	5″	990	
	Dhobi Street	...	5″	817	
	Dongri Street	...	5″	200	
	Chakla Street	..	8″	1,695	
	Huseinkhan Street	...	5″	459	
	Jambli Street	...	5″	466	
	Janjikar Street	...	5″	761	
	Khadak Street	...	5″	422	
	Memonwada Road	8″	5″	1,197	
	Nagdevi Road	...	5″	560	
	Naraven Dhuru Street ...	...	5″	341	
	Old Bengalpura Street ...	...	5″	391	
	Samuel Street	...	5″	2,267	
	Sarang Street	...	5″	1,070	
B & D	Sandhurst Road	...	5″	8,750	
C	Carnac Bridge	...	15″	60	
	Dady Sett Agiary Street ...	...	9″	84	
	Kika Street	3″	5″	1,443	
	Zaoba's Oart	...	5″	230	
	Do.	...	5″ & 4″	685	
D	Bhatwadi Lane	...	4″	1,017	
E	Agripada Estate	...	5″	73	
	Arab Lane	...	4″	1,490	
	Clerk Road	...	4″	40	

Ward.	Locality.	Size of old main.	Size of new main.	Length of new main.	Remarks.
E—*ctd.*	Clerk Road	..	8″	1,120	
	Do.	...	24″	600	Taken up and relaid.
	Chambar Lane	...	9″	640	
	Grant Road...	...	10″	151	
	Hansraj Lane	...	9″	175	
	Do.	...	5″	976	
	Do.	...	3″	50	
	Reay Road	...	6″	200	
	Tank Street...	...	5″	1,528	
	Temkar Street	...	5″	490	
	Undria Street	...	5″	610	
F	DeLisle Road	...	32″	645	
	Do.	...	12″	125	
	Do.	...	4″	20	
G	Fergusson Road	...	12″	907	

MAINTENANCE WORKS.

There were 58 bursts during the year as against 41 during 1911-12, 76 during 1910-11 and 117 during 1909-10 :—

20	Bursts on	3″ mains.
28	,,	4″ ,,
2	,,	6″ ,,
6	,,	32″ ,,
2	,,	48″ ,,
58		

The number of new connections made during the year was 640, including 17 branch connections. Connections cut off for various reasons numbered 267. The net increase, therefore, in the number of connections is 373 or 1·5 per cent. of the total number of connections which now stands at 23,954.

The total number of meters at present in use is 2,227. The number of meters removed and tested during the year was 1,693 with the following results :—

Stopped working	666
Working slow	720
Working fast	38
Test correct	269

These figures do not include a large number of tests made on the spot without removing the meters.

The number of disconnection orders submitted to the Standing Committee from time to time during the year was 572 against 304 last year. All these were sanctioned and have been dealt with as follows :—

(1) Disconnections not enforced owing to parties having complied with requirements	495
(2) Disconnections enforced	77

Waste Prevention.

The Waste Prevention Branch continued their operations throughout the year with the result that 918 underground and 20,162 aboveground defects were detected and repaired.

The following comparative statement shows the total length of water mains examined during the year under report and the preceding five years :—

	Excluding 2nd and subsequent tests.	Including 2nd and subsequent tests.
From 1st April 1907 to 31st March 1908	3,220	10,14,859
From 1st April 1908 to 31st March 1909	36,290	14,28,455
From 1st April 1909 to 31st March 1910	35,160	14,92,957
From 1st April 1910 to 31st March 1911	23,545	16,10,531
From 1st April 1911 to 31st March 1912	50,226	18,33,428
From 1st April 1912 to 31st March 1913	35,965	24,86,482

The total lengths of mains of all sizes sounded during the year under report was 45 miles and 3,330 feet.

The number of defect notices issued during the year was 5,031 against—

3,371 issued during the year 1907-08
4,496 „ „ „ 1908-09
3,890 „ „ „ 1909-10
3,617 „ „ „ 1910-11
4,594 „ „ „ 1911-12

Particulars of defects and leaks detected and remedied from 1st April 1912 to 31st March 1913 are given in the following statement marked A.

The quantity of water found running to waste as ascertained from inspections of water mains is given in the following statement :—

Month.	No. of Waste Water Meter Diagrams taken.	Wastage in small mains discovered and stopped in gallons per hour.	Wastage on large sized mains discovered and stopped in gallons per hour.
1912.			
April	119	30,650	450
May	125	33,300	.....
June	111	15,975	.....
July	124	24,025	.....
August	125	15,950	.....
September	105	32,025	.....
October	126	20,614	.....
November	103	15,025	.....
December	95	22,600	.....
1913.			
January	108	19,475	21,650
February	117	24,820	2,150
March	96	29,200	9,100
Totals ...	1,354	283,659	33,350

Financial.

The Budget grant for the maintenance of the Water Department for the year was Rs. 4,39,290 which, with the lapsed grants renewed and with the transfers and additional grants sanctioned, amounted to Rs. 4,98,475-1-6. The total expenditure incurred against this sum and paid for during the year amounted to Rs. 3,43,313-1-3, leaving an unexpended balance of Rs. 1,55,162-0-3, a portion of which will be renewed in 1913-14 to meet liabilities incurred during the year.

STATEMENT A.

Statement of above ground defects found at the Inspection of House Fittings during the year 1912-13 :—

Period.	Bib taps.			Service pipes.		Ball valves and tanks.			Stop taps leaking.	Sluice valves leaking.	Hydrants.		Meter coupling, flanges, holes, etc.	Miscellaneous	Remarks.
	Out of order.	Leaking.	Left open.	Leaking.	Without taps.	Ball valve out of order.	Tanks without ball valves.	Tanks leaking.			Old pattern.	New pattern.			
1912.															
April ...	599	1135	31	150	18	41	11	20	101	63	106	114	36	38	
May ...	411	989	27	185	9	61	19	1	146	130	97	206	65	37	
June ...	344	846	23	184	18	55	8	26	163	151	88	139	75	141	
July ...	527	1337	23	184	11	43	13	2	125	118	130	100	61	140	
August ...	459	1178	19	205	24	74	8	6	104	173	165	109	67	126	
September ...	374	993	38	211	18	45	14	2	106	95	125	255	91	128	
October ...	360	1113	29	210	11	74	25	4	135	187	151	243	90	121	
November ...	334	925	37	206	17	65	4	3	108	105	116	208	70	142	
December ...	179	714	29	187	6	78	11	6	96	110	121	256	86	154	
1913.															
January ...	353	939	41	177	5	67	5	4	109	100	118	201	71	77	
February ...	344	793	37	157	1	93	7	4	136	96	115	205	54	75	
March ...	275	859	35	194	19	128	4	2	120	141	127	210	53	87	
Total ...	3,999	11,715	369	3,248	157	824	129	80	1,442	1,419	1,463	2,276	819	1,231	

Total defects found above ground = 28,162.

Statement of underground defects found on Mains and service pipes up to the Stop Cocks by the Waste Prevention Branch at the Inspection of Water Mains during the year 1912-13.

Period.	Mains.		Sluice valves.		Hydrants.				Service pipes.		Stop taps.				Disconnected service pipes.		Water posts.	Miscellaneous holes in Mains, &c.
					Old pattern.		New pattern.				Old pattern.		New pattern.					
	Burst.	Joint.	Heavy.	Slight.	Heavy.	Slight.	Heavy.	Slight.	Broken.	Leaking.	Heavy.	Slight.	Heavy.	Slight.	Female leak.	Pipe leak.		
1913.																		
April ...	4	4	6	15	11	2	3	8	27	18	...	5	1	6	1	3	4	.....
May ...	...	6	9	10	4	10	4	11	17	24	1	1	5	4	...	4	1	...
June ...	...	2	4	4	1	2	1	4	6	10	...	1	4	5	...	...	...	...
July ...	1	...	3	7	5	3	5	2	14	9	...	...	5	...	2	...	...	...
August ...	2	4	1	7	2	3	2	...	13	13	1	...	...	1	2	2	...	...
September ...	...	3	7	4	6	4	12	1	26	11	1	2	6	4	3	...	...	...
October ...	1	7	3	8	3	6	4	10	8	19	...	...	1	3	...	...	...	...
November ...	1	4	4	7	2	3	3	1	7	5	...	1	3	5	3	...	1	...
December ...	...	1	7	8	2	2	12	9	3	6	...	...	3	...	6	...	...	1
1913.																		
January ...	4	9	5	2	5	8	6	6	10	8	...	...	2	1	1	2	...	1
February ...	2	12	7	10	9	8	6	20	8	15	1	1	6	5	1	1	2	...
March ...	1	10	9	14	...	5	5	6	11	7	...	...	3	1	5	...	1	1
Total ...	17	62	65	94	51	59	83	81	150	145	4	11	39	35	24	12	9	3 *

Total number of defects found below ground while inspecting Water Mains = 918
" " above ground " House Fittings = 28,162

Grand total of defects = 29,080

H. J. T. SMITH,
Hydraulic Engineer.

SUMMARY OF CLERICAL WORK DONE BY THE WATER WORKS DEPARTMENT.

1.	The No. of letters received during 1912-13	19,214
2.	The No. of letters despatched during 1912-13	18,436
3.	The No. of references made to Inspectors	37,522
4.	The No. of reports received from the Inspectors	62,279
5.	The No. of vouchers received and passed during 1912-13 ...	1,850
6.	The No. of Departmental and Private Works Bills prepared and forwarded during 1912-13	2,920
7.	The No. of references made to the Inspectors, &c., for certificates on vouchers	1,610
8.	The No. of reports and certificates received from the Inspectors	1,610
9.	The No. of requisitions received and forwarded	1,531
10.	The No. of Notices issued in connection with defective pipes and fittings	5,051
11.	The total No. of contracts executed	7
12.	The No. of advices sent to the Chief Accountant	3,254

TANSA WORKS

For Increasing and Improving the Water Supply to Bombay.

On 17th August 1911 the Hydraulic Engineer submitted the following proposals for increasing and improving the water supply to the city :—

(1) Raising Tansa Dam.
(2) Removal of villages from Tansa Catchment area.
(3) Widening earthwork embankments along the Tansa Syphons.
(4) Duplicating the 48" Tansa Syphons 1 to 8.
(5) Laying additional distributing mains in the city.
(6) Constructing a permanent reservoir at Ghatkoper.
(7) Constructing a service reservoir at Golangi Hill.
(8) Constructing a service reservoir at Sion Hill.

These proposals were referred to a Sub-Committee by the Corporation for consideration who on the 1st April 1912 submitted an *ad interim* report to the Corporation, recommending that proposals (1) (2) and (3) be taken in hand. The same Committee on the 9th July 1912 submitted a further report recommending the invitation of tenders for works to be done under item 4, while funds for works under item (5) were provided in the Budget Estimates for 1912-13. The Corporation approved of the recommendations of the Sub-Committee and on the 8th August 1912, sanctioned an advance of Rs. 2,50,000 towards the cost of the works. Tenders were invited on the 24th June 1912 for—

(1) Raising the Tansa Dam.

(2) Widening the earthwork embankments along syphons 1 to 8

and were received on 31st July 1912.

Both works were entrusted to Messrs. Pallonji Edulji and Son, and contracts with them were entered into on 2nd September 1912.

The Contractors have made good progress with the works during the year, and it is expected that they will be completed within the stipulated contract periods which expire on 31st May 1914 and 17th September 1913 respectively.

As regards item (4), Duplicating syphons 1 to 8, the question of whether steel or cast-iron should be the material employed in the construction of the pipes was the subject of serious consideration, and on the recommendation of the Sub-Committee the whole of the proposals made by the Hydraulic Engineer were submitted to Mr. Midgley Taylor of Messrs. Taylor Sons and Santo Crimp for his opinion.

Mr. Midgley Taylor arrived in India in June 1912 and visited the various works and on his return to England submitted his report to the Commissioner in which he agreed with the Hydraulic Engineer's proposals practically in their entirety, and recommended the use of steel for the Syphons north of Ghatkoper.

On these recommendations, the specifications and contracts were prepared and advertisements issued both in India and in England inviting tenders for supplying and laying the pipes.

Tenders were received on 28th March 1913 and the tender of Messrs. Mephan Fergusson Proprietory, Limited, was subsequently accepted. This firm has already taken active measures to commence the work and have promised completion of the whole work in about 18 months.

The chief distributing mains to be laid in the city comprised in item 5 above are—

(*a*) 32" main in DeLisle Road from the 27" Tansa main in Arthur Road to the 32" main in Parel Road.

(*b*) A 24" main from Malabar Hill Reservoir along Queen's Road and Princess Street and along Sandhurst Road.

(*c*) 12" main in DeLisle Road and Fergusson Road.

(*d*) 12" main in Mahim Bazaar Road.

The first two of these works have been commenced and satisfactory progress made with them, while tenders have been invited for the supply of material for all the remaining works.

K—FIRE BRIGADE.

I have the honour to submit the Annual Report on the working of the Fire Brigade Department for the year 1912-13.

During the year Mr. W. Nicholls, Chief Officer, was invalided from the service and awarded a pension of Rs. 400 per mensem, together with a special good service pension of Rs. 66-10-8 making a total of Rs. 466-10-8 per mensem.

On the 17th January, the date of Mr. W. Nicholls' retirement, I was appointed Chief Officer of the Brigade having held the acting appointment since July 24th, 1911.

The number of calls received totalled 174, an increase of 30 on the previous year, and 51 over the average of the preceding 10 years. Of these 162 were fires and 12 were false alarms. Fires extinguished by the Brigade totalled 104 and 58 were extinguished before the arrival of the Brigade.

The estimated damage to property has amounted to Rs. 15,20,093, a decrease of Rs. 7,84,610, compared with the preceding year, whilst the property at risk has been rated at Rs. 2,38,25,203.

The estimated damage to insured property has amounted to Rs. 14,51,718, and to uninsured Rs. 68,375. Buildings damaged by fire numbered 45, of which 26 were insured and 19 uninsured. 82 fires occurred in buildings where only the contents were damaged, 28 of which were covered by insurance and 54 uninsured. 35 fires occurred on open ground consisting principally of jowli huts.

Three persons lost their lives at fires during the year and several others received injuries. All the latter have since recovered. No blame was attached to the Brigade in any case. Several members of the Brigade also received injuries at fires none of which however, proved serious.

The water supply during the year has been satisfactory and the attendance of the Water Department staff prompt.

The quantity of water used for extinguishing fires has been 21,81,210 gallons or 9,737·5 tons. Of this quantity 15,83,210 gallons were taken from street mains and 5,98,000 gallons from the sea.

Fire Hydrant inspection throughout the City has been carried out periodically and the fire service at the Municipal Offices and Markets kept in good order and the staff drilled.

The Emergency Van attended on 10 occasions at fallen buildings during the year, 10 persons lost their lives by being overwhelmed and 7 received slight injuries, the collapse at Lal Bagh being responsible for 8 deaths and 5 persons injured.

The contract with Messrs. Balmer Lawrie and Co., for the supply of 3 Motor Engines, etc., incompleted in 1911-1912, owing to labour troubles was satisfactorily completed ; also a contract with the same firm for 3 Motor Engines and other small appliances and one for 50—100 feet lengths of Hose (additional) for the year 1912-1913.

All the Motor appliances are in good working order and continue to give satisfaction, the distance covered by these engines to the 174 calls of fire being 1,039 miles.

Owing to the advent of Motor traction in the Brigade 2 Steam Fire Engines and 4 Horses were disposed of during the year. One horse died and one was cast from the service (destroyed). The horses now in the Brigade number 10.

Provision has been made in the ensuing year's budget for the supply of 1,800 feet of delivery hose also a set and a half of wheels for the Motor appliances recently delivered.

The new station at Elphinstone Bridge Road was completed during the year and opened on the 8th August. A motor steamer and a turntable ladder and 20 men have been located there.

New up-to-date stations for the Fort and Naigam Districts have again received consideration by the Corporation. The rebuilding of Gowalia Tank Station has also received consideration.

A Fire Alarm system was also decided upon by the Corporation and the system put forward by the Bombay Telephone Company approved. The Company have been asked to draw up a contract for the erection and maintenance of 50 Alarms, the work of which is now being actively pushed forward.

All Telephone arrangements have worked satisfactorily.

An increase of 1 tindal and 14 men was sanctioned by the Corporation to the strength of the Brigade (with effect from the 1st April 1913) making a total of 259 of all ranks.

The efficiency of the Brigade has been maintained, and the general health of the Staff has been good. Forty members resigned or otherwise left the service during the past year.

I wish to express my thanks to the members of the Police Department and the Bombay Salvage Corps for the assistance rendered by them to the Brigade.

I have the honour to be,
Sir,
Your Most Obedient Servant
T. C. GREENOP,
Chief Officer, Fire Brigade.

The Budgetted strength and equipment of the Brigade :—

Strength.

1	Chief Officer.	16	1st Class Tindals.
2	Clerks.	9	2nd Class Tindals.
1	Head Foreman.	122	First Class Firemen.
7	Foremen.	63	Second Class Firemen.
1	Mechanic.	4	Mochies.
8	Engineers.	5	Drivers.
1	Fitter.	4	Grooms.
14	Motor Drivers.	1	Chauffeur.

Making a total of 259 men of all ranks.

Equipment.

6	Horse-drawn Steam Fire Engines.	9	Hand Fire Escapes.
4	Petrol Motor Engines.	8	Manual Engines.
4	Steam Motor Engines.	1	Hose Van.
1	Petrol Motor Tender.	1	Emergency Van.
1	Motor turntable Ladder.	1	Brake.
1	Motor Chemical Engine.	10	Horses.
17	Hose Reels.	1	Motor Car.
8	Tender Carts.	36,050	feet of Hose and other small appliances.

Numbers.	STATIONS.	Petrol Motor Pump.	Motor Steamer.	Horsed Steamer.	Manuals.	Hose Reels.	Coal Carts.	Motor Chemical Engine.	Motor Tenders.	Motor Ladder.	Fire Escape.	Hose Van.	Brake.	Emergency Van.	Horses.	Delivery Hose 50 feet.	Foremen.	Motor Mechanics.	Engineers.	Fitters.	Motor Drivers.	First Class Tindals.	Second Class Tindals.	Firemen of Grade.	Drivers.	Grooms.	Mochies.	Remarks.
1	Byculla ...	...	1	5	1	2	3	...	...	2	1	1	1	8	247	1	1	2	1	2	4	1	33	1	3	1	
2	Haines Road ...	...	1	...	1	...	...	1	...	1	...	...	...	...	87	1	...	...	...	3	1	1	17	...	...	...	Escape carried on Tender.
3	Gowalia Tank	...	1	...	...	1	1	...	...	...	1	...	...	...	42	1	...	1	...	1	1	1	22	...	...	1	
4	Chinchpokli ...	...	1	...	...	1	1	...	...	...	1	...	...	...	37	1	...	...	...	2	1	1	18	...	...	2	
5	Baboola Tank	...	...	1	...	...	2	1	1	...	...	1	...	...	...	59	1	...	1	...	2	1	1	16	...	...	...	Escape carried on Motor Chemical Engine.
6	Fort	...	...	...	1	...	1	...	...	...	...	1	...	...	2	37	1	...	1	...	...	1	1	13	1	1	...	
7	Golaba ...	...	1	...	...	1	2	1	...	...	...	1	...	...	...	63	1	...	...	...	1	1	1	16	...	...	...	Escape carried on Motor Pump.
8	DeLisle Road	...	...	...	...	1	1	...	...	...	...	...	...	...	...	13	...	...	...	...	...	1	...	7	...	...	...	
9	Mahim ...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	13	...	...	...	...	...	1	...	7	...	...	...	
10	Dadar ...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	13	...	...	...	...	...	1	...	7	...	...	...	
11	Mazagon ...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	13	...	...	...	...	...	1	...	7	...	...	...	
12	Bhuleshwar ...	...	...	1	...	...	1	...	...	...	1	...	...	...	...	41	...	...	1	...	1	1	1	6	...	...	...	
13	Mandvi ...	...	...	1	...	...	1	1	...	...	1	...	...	...	...	56	1	...	1	...	2	1	1	16	...	...	...	
	Total ...	4	4	6	8	17	8	1	1	1	9	1	1	1	10	721	8	1	8	1	14	16	9	185	5	4	4	

MUNICIPAL FIRE BRIGADE.

Summary of calls to fires (including false alarms) showing the number of times that appliances were used for attending and extinguishing fires during the year 1912-1913.

STATIONS.	How called.						Appliances attended.									How extinguished.									REMARKS.
	By Stranger.	By Police.	By Fire Alarms	By Exchange Telephone.	By Private Telephone.	Total.	Manuals.	Hose Reels.	Horse Steamers.	Motor Steamers.	Motor Pumps	Motor Tenders.	Motor Turntable ladder.	Hand Escape.	Hose Van, etc.	Buckets.	Hand Pumps.	Chemical Extinguisher.	Chemical Engine.	Hydrant.	Steamers.	Motor Pump.	Manual.	Sand.	
Byculla	7	...		135	...	142	..	3	7	47	5	...	...	3	7	...	...	...	...	3	8	2	...	...	
Haines Road ...	1	...		...	...	1	...	...	...	...	26	22	6	...	...	...	...	...	...	1	...	4	...	...	
Gowalia Tank ...	...	..		...	...	...	...	16	29	..	1	...	...	16	...	1	...	...	...	...	3	...	...	...	Motor pump attached 18th March 1913.
Chinchpokli	4	1		..	...	5	...	20	28	..	7	...	...	32	...	2	2	...	...	25	7	2	...	...	Motor pump attached 3rd February 1913.
Babula Tank ..	1	2		..	...	3	...	8	57	7	...	67	...	...	...	5	2	3	3	11	7	...	..	...	Escape carried on tender 19th June 1912.
Fort	3	...		...	...	3	...	3	27	..	...	...	...	18	...	...	1	...	...	4	4	...	...	2	
Colaba	3	1		..	...	4	...	15	1	...	15	...	...	2	...	3	...	1	...	2	...	5	...	...	Motor pump with escape attached 18th August 1912.
DeLisle Road ...	1	1		...	...	2	8	8	...	...	...	..	...	...	...	1	1	...	...	7	...	...	...	...	
Dadar	...	1		...	...	1	6	6	...	...	...	...	...	...	...	3	...	..	...	1	...	...	...	...	
Mahim	...	5		...	...	5	7	7	...	...	...	...	...	...	...	1	1	...	...	6	...	...	1	..	
Mazagon	1	...		...	...	1	...	2	...	...	...	...	...	..	...	1	...	...	...	...	...	...	...	1	
Bhuleshwar	5	...		...	...	5	...	25	...	49	...	...	...	29	...	2	2	4	...	3	11	..	...	1	
Mandvi	2	...		...	...	2	...	1	...	24	...	...	20	...	...	3	...	3	...	3	6	...	...	2	Station opened 8th August 1912.
Total ...	28	11	...	135	...	174	21	114	149	127	54	89	26	100	7	22	9	11	3	71	46	13	1	6	

System not yet in order.

List of causes of fires for the year 1912-1913.

CAUSES.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Total.
Acid, goods coming in contact with ...	1	...	...	...	...	...	...	...	...	...	...	...	1
Boiler, overheat of	...	...	...	...	...	1	...	...	...	...	...	...	1
Candle, goods coming in contact with ...	...	...	...	...	...	...	...	...	1	...	...	...	1
Dammer boiling over	...	1	...	...	...	...	...	...	...	...	...	...	1
Defective electric circuit.	...	...	...	3	1	...	1	...	2	1	2	...	10
Do. flue ...	...	...	...	...	...	...	1	...	...	...	...	...	1
Doubtful... ...	...	...	...	...	1	...	...	...	...	...	...	...	1
Fat boiling over	2	...	...	...	1	...	...	...	...	...	...	1	4
Fireplace, over-heating of	...	...	...	...	1	...	...	1	...	...	2	...	4
Fire, sparks from	1	1	...	1	1	1	...	2	6	1	2	2	18
Fireworks, letting off	...	...	...	...	...	...	...	3	...	...	...	...	3
Friction	...	...	...	...	...	...	1	...	4	2	..	1	8
Gas, escape of ...	...	1	...	...	...	...	1	...	...	...	1	...	3
Kerosine oil lamp, explosion of ...	...	...	...	...	...	...	1	...	...	...	...	...	1
Kerosine oil lamp, overheating of ...	2	...	1	...	...	1	1	...	..	...	...	1	6
Kerosine oil lamp upsetting	1	...	...	2	...	2	1	1	1	..	...	...	8
Kitson lamp upset	...	...	...	1	...	...	1	...	...	...	...	...	2
Light thrown down ..	2	4	1	1	1	4	1	2	4	6	4	...	30
Light thrown from street.	...	1	...	...	...	..	..	...	...	...	...	...	1
Locomotive sparks from...	...	1	...	...	...	...	...	...	...	...	...	1	2
Matches, children playing with	1	...	...	...	...	...	...	1	...	...	1	...	3
Machinery, friction of ...	...	...	...	1	...	3	...	...	...	...	...	...	4
Naked light, clothing coming in contact with.	...	...	...	...	...	...	...	...	...	...	...	1	1
Oil engines, explosion of...	...	...	...	...	1	...	...	...	...	...	...	...	1
Oil lamp, over-heating of	...	...	...	...	1	...	1	...	1	...	...	...	3
Do. upset ...	...	...	...	...	1	...	...	2	...	1	1	2	7
Petrol vapour, light coming in contact with ...	...	...	...	..	...	...	1	...	...	...	...	...	1
Rubbish burning ...	...	...	...	...	...	...	1	...	...	...	...	1	2
Smoking tobacco ...	...	...	1	...	...	...	...		...	...	...	...	1
Stove, over-heating of ...	...	...	...	...	...	...	...	...	...	..	1	...	1
Sugar boiling over ...	...	...	...	1	...	...	...	...	...	...	...	...	1
Steam wagon, sparks from	1	...	...	...	...	...	...	...	..	...	...	...	1
Spontaneous ignition ...	...	...	...	...	...	...	...	...	...	1	...	...	1
Unknown	3	...	2	1	1	1	2	1	4	5	3	6	29
Total ...	14	9	5	11	10	13	14	13	23	17	17	16	162

List of Fires through which property to the extent of Rs. 2,000 and upwards was destroyed during the year 1912-1913.

Date.	Locality.	Description of Property destroyed.	Estimated Value.
1912.			Rs.
6th April ...	Gunpowder Bunder	Paints, etc.	3,000
9th „ ...	New Parbhadevi Road	Cotton Mill	10,400
30th „ ...	Thakurdwar Road	Metal Works	18,050
9th May ...	Kala Chowky Road	Cotton Mill	2,000
29th „ ...	Wari Bunder	Grain, etc.	2,500
9th July ...	Grant Road	Theatre	72,250
27th „ ...	Sewri Cross Road...	Cotton Mill	80,000
10th August ...	Bhendy Bazar	Printing Press	41,370
14th „ ...	Mahomedan Lane	Basket makers	2,020
8th September ...	Kala Chowky Road	Cotton Mill	4,000
8th „ ...	Chinchpokli Road	Do.	25,000
13th „ ...	Panjarpole Street	Cotton Yarn Godown	4,100
27th „ ...	Haines Road	Cotton Mill	1,00,000
5th October ..	Chinchpokli Road	Do.	91,000
23rd „ ...	Sassoon Docks	Cotton Press	2,50,000
12th November ...	Thore Gully	Contractors Shed	2,800
2nd December ...	eLisle Road	Cotton Mill	18,000
11th „ ...	Haines Road	Do.	2,500
12th „ ...	Abdool Rahiman Street	Fancy Goods Godown	2,000
13th „ ...	Bhendy Bazar	Stables	20,600
17th „ ...	Mangaldass Road...	Hardware Godown	9,600
19th „ ...	Grant Road	Timber Yard	2,000
29th „ ...	DeLisle Road	Cotton Mill	6,000
31st „ ...	Tardeo Road	Do.	3,000
1913.			
14th January ...	Henry Road, Colaba	Cotton	7,000
18th „ ...	Fergusson Road	Cotton Mill	3,000
20th „ ...	Kala Chowky Road	Do.	5,000
20th „ ...	2nd Clive Cross Lane	Rag Godown	4,250
12th February ...	Arthur Bunder	Cotton	7,000
19th „ ...	DeLisle Road	Cotton Waste Godown	3,000
20th „ ...	Cotton Green, Colaba	Cotton	2,50,000
16th March ...	Do. do.	Do.	1,00,000
29th „ ...	Carnac Road	Cotton Press	3,50,000

Brief details of fires responsible for the 3 lives.

Date.	Time.	Place.	Remarks.
August 23rd, 1912 ...	3-8 P.M.	Abdul Rahiman Street.	Rookmanibai, aged 27 years, supposed to have committed suicide by saturating her clothing with oil and setting fire to it.
March 22nd, 1913 ...	9-27 P.M.	Janjikar Street, Mandvi	Krishnabai, aged 30 years, while endeavouring to extinguish a lamp which had become upset her clothing caught fire and she was severely burned about the legs and lower part of body. Removed to hospital and died.
March 29th, 1913 ...	5-38 P.M.	Carnac Road ...	Raibai, aged 15 years, reported missing at 3 A.M. on the morning following the fire. Her body was subsequently recovered in the compound. Evidently while making her escape from the Mill she was overwhelmed by fallen debris and suffocated.

Brief details of the most serious fires of the year.

Date.	Time.	Place.	Business.	Extinguished by	Damage.	Estimated loss.
1912.						Rs. a. p.
July 9th ...	2-45 A.M.	Grant Road ...	Theatre.	4 Steamers and 1 Petrol Pump.	A corrugated iron and wood building of 2 floors about 150′ × 80′ and contents burned out and fallen down.	72,250 0 0
July 27th...	3-5 P.M.	Sewri Cross Road, Matunga.	Cotton Mill.	1 Steamer, 1 Petrol Pump and 1 Hydrant.	A building of 2 floors about 120′ × 80′ 1st floor used as milling room, ground floor as carding room, and contents, severely damaged by fire, roof off and partly fallen down.	.....
					A building of 2 floors about 80′ × 20′ (adjoining and communicating) used as store and press room, and contents, severely damaged by fire and part of roof off. Contents of a building adjoining used as machine and engine room slightly by water	80,000 0 0
Aug. 10th..	7-57 P.M.	Bhendy Bazar, Parel Road.	Printers.	2 Steamers, 1 Petrol Pump and 1 Hydrant.	A building of 5 floors about 130′ × 100′, rear portion used as printers' paper godown and school, front portion as shops and dwellings over. Ground floor used as printing press and paper godown, and first floor used as compositors, rooms, and contents, severely damaged by fire, 3 upper floors used as school, and contents slightly by heat and smoke and front portion of building by water	41,370 0 0
Sept. 27th.	6-36 P.M.	Haines Road, Byculla.	Cotton Mill.	3 Steamers, 1 Petrol Pump, and Private Appliances.	A building of 2 floors 80′ × 60′ used as boiler-house workshops and sizing rooms, 1st floor used as sizing room and contents burned out, roof off and partly fallen down; ground floor used as boiler house and workshops and a building of one floor 60′ × 20′ (adjoining and communicating) used as winding room, severely damaged by fire, and about one-half of contents of top floor of a building of 4 floors 100′ × 60′ used as Hosiery Department slightly by fire, lower part of building used as weaving room and cotton godown by water	1,00,000 0 0
Oct. 5th ...	4 6 A. M.	Chinchpokli Road.	Cotton Mill.	2 Steamers and 1 Petrol Pump.	A building of 2 floors 150′ × 90′ used as cotton godown, ground floor and contents severely damaged by fire, 1st floor and contents slightly by heat and smoke	91,000 0 0
Oct. 23rd...	1 44 A. M.	Sassoon Dock, Colaba.	Cotton Press.	4 Steamers and 1 Petrol Pump.	A building of 1 and 2 floors, 200′ × 150′ used as cotton press and cotton waste store, 1st floor used as waste store and contents burned out, press, on ground floor and contents severely damaged by fire and most part of roof off. Offices and engine room (adjoining and communicating) and contents slightly by water ...	2,50,000 0 0

Brief details of the most serious fires of the year—*contd.*

Date.	Time.	Place.	Business.	Extinguished by	Damage.	Estimated Loss.
1913.						Rs. a. p
Feb. 20th...	5-36 A. M.	Cotton Green, Colaba Causeway.	Cotton..	3 Steamers, 2 Petrol Pumps and 1 Hydrant	12 stacks of compressed bales of cotton covering an area of about 70′×70′ severely damaged by fire, heat, smoke and water and ground tiers of surrounding stacks slightly by water	2,50,000 0 0
March 16th	8-49 P. M.	Do.	Do.	2 Petrol Pumps..	2 stacks of compressed bales of cotton (about 1,300) severely damaged by fire, heat, smoke and water, and ground tiers of surrounding stacks slightly by water ...	1,00 000 0 0
March 29th	5-38 P. M.	Carnac Road ...	Cotton Press.	6 Steamers, 1 Petrol Pump and Private Appliances.	A building of 2 floors 120 ×60 used as cotton press, a building of 2 floors 80′×60′ and a building of 2 floors 60′×30′ used as godowns and contents severely damaged by fire, roofs off and partly fallen down and a corrugated iron shed 60′ × 30′ used as stable and a lean to shed used as store and contents slightly by fire, heat, smoke and water	3,50,000 0 0

Monthly Summary of Fires and Annual Losses for the period 1903-1904 to 1912-1913.

Year	April	May.	June.	July.	August	September.	October.	November.	December.	January	February.	March.	Total.	Estimated Loss.
														Rs
1903-1904...	8	10	8	6	1	5	4	7	4	7	11	13	78	10,94,563
1904-1905 ...	4	9	7	2	8	5	5	18	9	6	13	7	88	22,13,462
1905-1906 ...	5	5	4	10	5	8	7	13	10	5	9	27	108	15,15,126
1906-1907 ...	5	16	25	7	6	4	14	9	6	9	9	10	120	55,38,801
1907-1908...	12	10	7	4	1	6	6	13	10	11	18	4	102	33,36,274
1908-1909 ...	7	11	7	5	2	8	11	11	9	12	9	10	102	23,94,164
1909-1910...	9	18	8	7	6	4	9	5	7	10	17	9	109	15,65,557
1910-1911 ...	8	8	9	14	3	2	7	18	16	8	13	11	117	5,76,742
1911-1912 ...	12	8	4	7	8	12	14	7	13	11	11	17	134	23,04,703
1912-1913 ...	14	9	5	11	10	13	14	13	23	17	17	16	162	15,30,093

L.—PUBLIC GARDENS.

REPORT OF THE SUPERINTENDENT OF MUNICIPAL GARDENS RECEIVED UNDER HIS No. 645 OF 28TH MAY 1913.

SIR,

I have the honour to submit the Annual Report on the Administration of the Municipal Gardens under my charge for the year ended 31st March 1913.

2. The following gardens were maintained during the year under report :—

(*a*) Victoria Gardens.

(*b*) Elphinstone Circle Garden.

(*c*) Northbrook Garden.

(*d*) Malabar Hill Garden.

(*e*) Dick's Tank Garden.

(*f*) Falkland Road Garden.

(*g*) Sir Cawasji Jehangir Garden at Mahim.

(*h*) Bazar Gate Garden.

(*i*) Municipal Office Garden.

(*j*) Esplanade Bandstand Green.

(*k*) Chowpatty Bandstand (temporary).

3. The total number of visitors to the Victoria Gardens during the year under report was 14,96,569 against 16,18,810 in the previous year. The decrease of about a lac and twenty-three thousand is partly due to the change of the day on which admission fee is charged, from Wednesdays in the previous year to Saturdays in the year under report, the number of visitors on days on which admission fee is charged being necessarily much smaller than on days on which the gardens are open free especially on a day like Saturday. The larger number of the previous year is also partly accounted for by the influx of a large number of people during the arrival of the King Emperor in that year.

4. As usual a good deal of the work had to be postponed and great difficulty in maintaining the garden was experienced during several months in the year on account of the scarcity of men, and in some months the work had to be carried on with a deficient staff when even ordinary coolies were not available to replace absentees.

5. The difficulty of maintaining the Gardens in a proper condition was much increased by the shortage of water supply which has been decreasing year by year. It is hoped that this difficulty will soon be obviated by the duplication of the Tansa supply.

6. Several roads were rematalled, as usual, and all the roads repaired and kept in good order throughout the year. Part of the grant was intended to be utilized for tarring some of the main roads of the garden so as to economise water used for watering them and to preserve the roads from damage done by drippings from trees and surface scouring during the rainy season, but as tar was not available the work had to be postponed to be done in the current year.

7. There being no effective drainage for storm-water in the garden, a scheme was drawn up by the Deputy Executive Engineer, Drainage, costing about Rs. 17,257 which amount was proposed to be spread over four years, and a part of the work was done in the year under report.

8. A few more plots of lawns were renovated, and the planting of suitable groups of shrubs and trees and newly introduced plants continued during the year.

9. A few more clumps of Bambusa arundinacea and one clump of Dendrocalamus strictus bamboos and one more Talipot palm (Corypha umbraculifera) flowered and seeded during the year under report.

10. During the past two years an attempt has been made to grow orchids obtained from Assam on trees in the Gardens, and has proved successful to a great extent.

11. Slugs (Vaginula sp.) have been causing considerable trouble for two years past, being found in large numbers in shrubberies and beds all over the garden destroying young tender plants and seedlings of annuals in beds. The only effectual way of diminishing the pest has been found to be handpicking at night when they come out and destroy them. Some men are put every night on the work for the past two years and large quantities collected and destroyed daily, and though their number has decreased considerably thereby, they have not yet been eradicated. The Imperial Entomologist, Agricultural Research Institute, Pusa, whose advice was sought could suggest no better remedy.

12. The Rhinoceros Beetle (Oryctes rhinoceros) has also been causing great damage to palms for several years past, killing a number of old palms as well as new and rare palms which have recently been planted out. Handpicking is the only effectual remedy in this case also, but unfortunately the beetles breed elsewhere and attack the palms at night, and their presence is found only after the damage has been done to the palms.

13. During the year under report rats were found to do considerable damage to young seedlings of annuals and bulbous plants, in the beginning of the cold season, but their ravages were put a stop to by trapping and poisoning them.

14. The new conservatory planted in the previous year has been making very satisfactory progress.

15. A list of new plants added to the collection during the year under report is given in Appendix **A.**

16. As usual band performances were given at the Victoria Gardens, Esplanade Band-stand and Chowpatty, except during the monsoon.

17. At the Esplanade Band-stand the performances were given every Wednesday and alternate Saturdays, and they have continued to be very popular.

18. At Chowpatty they were given once a fortnight only on Tuesdays and have been much appreciated. Provision has been made in the budget for 1913-14 for providing 25 more benches there which convenience is likely to attract a large number of people who are prevented from the enjoyment provided by the performances for want of a sufficient number of seats.

19. At the Victoria Gardens band performances were given every Saturday, admission fee being charged fortnightly on Saturdays, and the performances being open free on the alternate Saturdays. A considerable increase in the number of visitors during band performances on Saturdays with admission fee has resulted from this change to a more convenient day. In all eighteen performances with admission fee were given during the year—the total number of visitors on these eighteen days being 26,659 and total fees realised 2,829-8-0, averaging 1,481 visitors and Rs. 157-3-1 on each of these days against 1,240 visitors and Rs. 134-6-0 received as fees in the previous year.

20. Thanks are due to the Bombay Electric Supply and Tramways Company, Limited, for continuing the favour of carrying the bandsmen to the Victoria Gardens and Chowpatty in reserved cars, free of charge.

21. As the old quarters for the Overseer in the Gardens were declared past repairs and unfit for habitation, provision was made for constructing new ones which were taken in hand and nearly completed at the end of the year.

22. The improvement of the Zoological portion of the Gardens still remains in abeyance, owing to no grants being sanctioned for the construction of new cages, etc. The grant for the repairs and renovation of old cages was utilized for repairing the Game Birds' and the Acquatic Birds' enclosures, part of the work remaining incomplete at the end of the year. The renovation of the Cockatoo Cage alluded to in paragraph 17 of the last report could not be carried out during the year under report, but it is hoped it will be taken up departmentally during the current year.

23. The number of visitors taking elephant rides during the year under report was 6,458 adults and 11,509 children against 7,338 adults and 12,226 children in the previous year. This decrease in the number was due to the same causes which have been mentioned in

paragraph 3 as regards the total number of visitors to the Gardens. Similarly camel rides were availed of by 336 adults and 329 children against 397 adults and 343 children in the previous year.

24. Appendix **B** to this report contains a list of additions and casualties, &c., of animals during the year under report.

25. Amongst those born in the Gardens mention may be made of Rheas, five of which were hatched successfully in the month of July, but none of them unfortunately survived long on account of the very damp condition of their enclosure at that time. A Leopardess also gave a litter of two cubs in June last. One of them was stillborn and the other died seven months after birth from gastritis and congestion of lungs due to a chill. Among other births during the year were a Campbell's monkey and a Llama.

26. The important purchases during the year were a young Tigress; two black Apes; two Ruffed Lemurs; four white Swans; three Egyptian Geese; two Victoria Crown Pigeons; one Ocelot and two Ringtailed Coati; the last two of which being for the first time added to our collection since the Zoo was formed.

27. The exchange transaction of the year included two African Serval Cats, which were also the first specimens of their kind in our collection. They were, however, received in a very weak condition and did not survive long.

28. The Gardens received, as usual, a number of presents, the principal ones being a Beatrix Antelope presented by H. E. Lord Sydenham; two Leopard Cats, one Mouse Deer and one Sambur by Mr. R. L. Sinclair; two Barasingha Deer by Mr. L. MacDowell and one Uryal by Captain F. W. Townsend.

29. In January last there was an outbreak of Rinderpest amongst the deer and antelopes, &c., in the Gardens; and though the spread of the disease was promptly checked by thorough disinfection and isolation of the rarer animals, it carried off in about a week's time no less than seven animals, *viz.*, a pair of Sambur, a Nilgai, a Spotted Deer and three Four-horned Antelopes. As soon as the first case was properly diagnosed, an attempt was made to get at once anti-tinderpest serum from Bombay and Poona; but as it could not be obtained from these places the Imperial Bacteriologist, Muktesar, was wired for it. By the time the serum arrived from him a quantity was also afterwards received from the Superintendent, Civil Veterinary Department, Bombay Presidency, Poona, through the Principal, Veterinary College, Bombay, and though, by that time the spread of the disease appeared to have been entirely checked by the steps taken to disinfect the enclosures, thirty-three animals were inoculated with the serum as a safeguard, and no cases occurred after that. Other important casualties during the year were a tigress from paralysis due to a sudden chill on the spine; a Himalayan Bear, a Gold Pheasant, a White-necked Crane, two Black Swans and a Spoonbill from injuries caused by other animals; two Manual Pheasants from chickenpox; a Brown Bear, an Uryal, three Gazelles, a Jungle Fowl and a Green Monkey from enteritis and gastro-enteritis; two Ringtailed Lemurs and a Barasingha from Scepticæmia; a Monaul Pheasant from tuberculosis; a Serval Cat and a Mouse Deer from pneumonia; and a Ruffed Lemur from suspected plague. As a number of birds were dying every year from Fowl Cholera, the Director of the Bombay Bacteriological Laboratory, Major W. G. Liston, I.M.S., was requested to prepare a prophylactic vaccine which he kindly did and with his assistance a number of birds were inoculated with it. This step has checked the disease to a great extent, and though some deaths occurred from the disease even after inoculation, an increased dose of the vaccine, as suggested by the Director, will, it is hoped, prevent even these few cases in future.

30. The Agents of the B. B. & C. I. Railway Company, the G. I. P. Railway Company, Udaipur-Chitorgarh Railway and Rohilkhand Kumaon Railway have continued to favour us with free passes or concession rates for bringing animals to Bombay from different stations on their lines, for which our best thanks are due to them.

31. The Northbrook and the Sir Cowasji Jehanjir Garden at Mahim continue to be occupied with health camps.

32. There being little prospect of the Flora and Wellington Fountains being played on account of deficiency in water supply, until the Tansa supply is duplicated, it was proposed to fill up with earth and turf the basins of the Fountains with a few beds of foliage and flowering plants made thereon, so as to improve their appearance. It was at the same time proposed to improve the space surrounding the Queen's Statue by making some beds thereon. A small grant was made for the purpose, and the work was taken in hand at the end of the year under report.

33. The table below shows the Budget grants and actual expenditure on the various gardens during the year under report :—

Name of Garden.	Budget Grants.			Expenditure.			
	Rs.	a.	p.	Rs.	a.	p.	
				64,865	3	1	
				24,403	6	4	Amount to be paid for liabilities incurred during the year.
(*a*) Victoria Gardens	93,245	4	2	89,268	9	5	
				6,901	6	11	
				8,992	8	2	Do. do.
Do. New Works ...	16,501	6	5	15,893	15	1	
				1,508	2	10	
				565	8	2	Do. do.
(*b*) Elphinstone Circle Garden ...	2,289	0	0	2,073	11	0	
				1,450	10	11	
				453	6	11	Do. do.
(*c*) Northbrook Garden	2,171	11	1	1,904	1	10	
				688	0	0	
				83	13	1	Do. do.
(*d*) Malabar Hill Garden ...	1,407	0	0	771	13	1	
				242	7	10	
				16	11	6	Do. do.
(*e*) Dick's Tank Garden... ...	482	0	0	259	3	4	
				341	8	9	
				67	13	7	Do. do.
(*f*) Falkland Road Garden ...	565	0	0	409	6	4	
(*g*) Sir Cawasji Jehangir Garden.	828	0	0	428	9	11	
				244	12	1	
				25	8	3	Do. do.
(*h*) Bazaar Gate Garden ...	525	0	0	270	0	0	
				4,895	15	0	
				40	9	0	Do. do.
(*i*) Esplanade Bandstand ...	5,909	0	0	4,936	8	0	
(*j*) Chowpatty Bandstand ...	1,900	0	0	1,340	0	0	
Total Rs. ...	1,25,823	5	8	1,18,244	2	4	

I have the honour to be,

Sir,

Your most obedient servant,

C. D. MAHALUXMIVALA,

Superintendent, Municipal Gardens.

APPENDIX A.

LIST OF PLANTS ADDED TO THE COLLECTION IN 1912-1913.

Names of Plants.	From whom received.
Clerodendron fallax	In exchange from the Superintendent, Empress Gardens, Poona.
Cassia Renigera	Presented by Mr. A. M. D'Cruz, Bombay.
Drymophloeus leprosus	Purchased from the Agri-Horticultural Society of Madras.
Acrocomia corollina	
Euracles Cunninghami	Purchased from the Agri-Horticultural Society of India, Calcutta.
Pancratium dwarf	
Ficus diversifolia...	
Garcinia Cowa	
Hoya parasitica	
Strobilanthes (Goldfussia) anysophyllus	
Thunbergia (Hexacentris) coccinea	
Gustavia augusta	
Iris blue	
„ white	
Jacquinia armillaris	
Jasminum Sambac "Khoi"	
„ „ "Motia"	
„ „ "Roi"	
Noronhia emarginata	
Momordica cochinchinensis	
Melodinus monogynus	
Homalomena aromatica	
Gomphostemma melissæfolium	
Funkia (Plantain Lily)	
Helicteres Isora	
Olea Europæa	Purchased from Messrs. Do & Co., Calcutta.
Betula utilis (Bhojpattra)	
Laurus Cassia	
Piper Cubeba	
Erythrina Blackei	
Dombeya (Astrapaea) Wallichi...	
Brunfelsia (Francisea) uniflora	
„ „ compacta	
Iris blue	
„ orange yellow	
Clematis Glori de St. Julian	
Chalta, Creeping	
Pankarpur	
Jasminum (Bella Rye)	
„ (Bella Khoya)	
„ (Joohee double)	
„ („ single)	
„ („ China)	
„ („ Swarna)	
„ (Chameli Swarna)	
„ (Kund)	
„ (Kat Mullica)	
„ (Naleo Mullica)	
Durapi	
Mesua ferrea	

APPENDIX A.—*continued.*

Names of Plants.	From whom received.
Adiantum cuneatum	In exchange from Messrs. Mooniswamy & Sons, Bangalore.
„ „ var. fragrantissimum	
„ „ Lawsoni	
„ „ sp.	
„ „ var. mundulum	
„ luddemannianum	
„ tenerum	
„ tinctum	
„ Williamsii	
„ Kerabœanum	
Acacia leucophloea	In exchange from the Superintendent, Government Botanical Gardens, Lal Bag, Bangalore.
„ hirsutissimum	
„ Suma	
Bougainvillea the Maharaja of Mysore Hybrid No. 1.	
„ „ „ „ No. 2.	
Clematis arista	
Hoya carnosa var. variegata	
Erythrina Corallodendron	
„ lith sperma	
Saraca cauliflora	
Desmodium arboreum	
Calliandra vittata...	
Cotyledon (Echeveria) glauca	
Sedum Aizoon	
Miconia hookeriana	
Crinum longifolium	
„ Powellii	
„ amabile	
Liquidambar formosana	
„ styraciflua	
Adenocalymna calycina	
Spathodea nilodica	
Stephanotis floribunda var. Elvaston	
Dombeya punctata	
Verbesina gigantea	
Gazania splendens	
Rudbeckia purpurea	
Parthenium argentatum	
Vangueria spinosa (edulis)	
Veronica imperalis	
Wikstrœmia indica (viridiflora)	
Negundo aceroides	
Bassia longifolia	
Trichlia natalensis	
Vitex cuneatum	
Bambusa Fortunei	
Strobilanthes anisophyllus	
Polypodium (Drynaria) quercifolium	
Osmunda regalis	
Chrysobalanus Icaco	
Amphilobium Mutisii	
Aristolochia fimbriata (Bouplandii)	
Clematis Flammula	
Lonicera caprifolium	
Monstera deliciosa (Philodendron pertusum) ...	

APPENDIX A.—*concluded.*

Names of Plants.	From whom received.
Hibiscus rosa rubro plenno	
Berria Ammonilla	
Bursaria spinosa	
Callistris rhomboidea	
Sterculia alata	
„ diversifolia	
Begonia lobulata	
„ maculata...	
„ President Carnot	
Maranta insignis	
Pandanus Baptistii	
„ furcatus variegatus	
„ Leuzonensis	
„ variegatus	
Kalanchoe Kirkii	
Mesembryanthemum multiflorum	
Sabal Adonsoni	
„ glaucescens	
Thrinax argentea...	
„ parviflora	
Alocasia alba	
„ longiloba (gigantea)	
Caladium marmoratum (Alocacia Rœzlii)	
Alocasia thibautiana	In exchange from the Superintendent, Government Botanical Gardens, Lal Bag, Bangalore.
Belamcanda chinensis (punctata)	
Crypianthus nitidum	
Forsteromia floribunda	
Funtumia elastica...	
Adiantum gracile	
Davallia fijiensis var plumosa	
„ Speluncæ	
Lomaria gibba	
Nephrodium Conterminum	
„ polymorphum	
Polypodium aureum	
Duranta turbinata...	
Erythrina Blackei...	
Hibiscus Cameroni	
Polypodium irioides	
Jasminum rigidum	
Hymenaea Courbaril	
Trewia nudiflora	
Dictyosperma album (Areca alba)	
Ficus Cunhinghamii	
Gymnocladus dioica	
Sterculia platinifolia	
Adiantum cuneatum var grandiceps	
Cœlogyne ochracea	Purchased from Mr. Shariffshah, Imphal.
Albizzia odoratissima	Presented by Messrs. J. Hormusji & Co., Bombay.

C. D. MAHALUXMIVALA,
Superintendent, Municipal Gardens.

APPENDIX B.

List of increase and decrease of animals in the Victoria Gardens during 1912-13.

A.—The following were added to the collection during the year under report :—

BY PRESENTATION.

1	Indian Antelope	Presented by Mr. C. E. Tapsell.
1	Uryal	,, ,, Captain F. W. Townsend.
1	Malbrouck Monkey	,, ,, Mr. W. J. Allen.
2	Spotted Deers	,, ,, The Bombay Natural History Society.
1	Coral-beaked Pigeon	,, ,, Mr. Norman Payne.
1	Indian Squirrel	,, ,, ,, H. Howard
1	Leopard	,, ,, ,, A. H. Banaji.
2	Indian Lorikeets	,, ,, ,, Deomal Oodhavdas.
1	Leopard	,, ,, the Chief of Aundh.
1	Nilgai (young)	,, ,, Mr. Nowroji P. Contractor Naigaumwala.
1	Sambur do.	
2	Barasingha Deers	,, ,, Mr. L. MacDowell.
1	Nilgai	,, ,, the Dungarpur State.
3	Leopard Cubs	
1	Malbrouck Monkey	,, ,, Mr. C. McIntyre.
2	Leopard Cats	,, ,, Mr. R. L. Sinclair.
1	Indian Mouse Deer	
1	Sambur (young Doe)	
1	Persian Gazelle	,, ,, Mrs. Warden.
1	Do.	,, ,, Mr. Michael Rosario.
1	White Stork	,, ,, ,, Buswell.
1	Indian Sloth Bear	,, ,, ,, W. S. Davis.
1	Leopard Cub	,, ,, ,, H. Wolf.
1	Small Indian Civet	,, ,, ,, R. D. Sethna.
1	Four-horned Antelope	,, ,, Mrs. N. N. Wadia.
1	Sloth Bear	,, ,, ,, R. H. Heath.
1	Indian Gazelle	,, ,, Mr. Thomas Lyon.
1	Do.	,, ,, ,, Gullamhussein Currimbboy.
1	Leopard Cub	,, ,, the Thakore Saheb of Ambaliara
1	Indian Antelope	,, ,, Mr. G. Walton.
2	Muscovi Ducks	,, ,, ,, N. Kerr.
1	Four-horned Antelope	,, ,, Mrs. D. Stringfellow.
1	Indian Gazelle	,, ,, Mr. J. Counsell.
1	Malbrouck Monkey	,, ,, ,, E. J. Edwardes.
1	Persian Gazelle	,, ,, ,, J. A. Madon, I.C.S.
2	Indian Sloth Bears	,, ,, Captain C. Cobham.
1	Sambur	
1	Indian Gazelle	,, ,, Mr. T. Hawkins.
1	Beatrix Antelope	,, ,, H. E. Lord Sydenham.
1	Leopard	,, ,, Mr. M. C. Petit.
1	Tufted Pochard	,, ,, ,, S. D. Sukhia.

BORN IN THE GARDENS.

8	Indian Antelopes	1	Campbell's Monkey.
1	Gazelle	1	Nilgai.
1	Leopard	3	Spotted Deers.
5	Rheas	1	Llama.

BY PURCHASE.

1	Wallaby	2	Victoria Crown Pigeons.
2	White-crested Cockatos	4	Red-crested Cardinals.
4	Ring-necked Pheasants	4	White Swans.
1	Gold Pheasant	3	Egyptian Geese.
2	Black Apes	1	Ocelot.
1	Sykes' Monkey	2	Ring-tailed Coatis.
2	Ruffed Lemurs	1	Tigress.
2	Demoiselle Cranes		

BY EXCHANGE.

8	Langur Monkeys ... From the State Gardens, Baroda.	2	Serval Cats ... ... Willison's Circus.
2	Wallabies	1	Baboon ... ...

B.—The following animals died during the year under report :—

1 Tragopan.
1 Cabbot's Tragopan.
1 Red-crested Pochard.
1 Gold Pheasant.
6 Monaul Pheasants.
1 Reeve's Pheasant.
3 Jungle Fowls.
1 Pintail Duck.
1 Painted Stork.
1 Egyptian Goose.
2 Black Swans.
1 White Swan.
1 Brahminy Duck.
1 White-necked Crane.
1 Roseate Cockatoo.
1 Lesser Sulphur Cockatoo
1 White-crested Cockatoo.
3 Indian Lorikeets.
1 Crowned Pigeon.
1 Victoria Crowned Pigeon.
2 Black-throated Jays.
1 Spoonbill.
1 Brown Bear.
1 Himalayan Bear.
2 Uryals.
2 Persian Gazelles.
2 Indian Gazelles.
3 Four-horned Antelopes.
7 Indian Antelopes.
1 Barasingha.
2 Samburs.
1 Spotted Deer.
1 Mouse Deer.
1 Nilgai.
1 Malbrouck Monkey.
2 Ring-tailed Lemurs.
5 Langur Monkeys.
1 Green Monkey.
1 Ruffed Lemur.
1 Crab-eating Monkey.
5 Rhesus (chicks).
1 Tigress.
3 Leopard cubs.
2 Leopard Cats.
2 Serval Cats.
1 Wallaby.
and a few small birds and mammals.

C. D. MAHALUXMIWALA,
Superintendent, Municipal Gardens.

M—VICTORIA AND ALBERT MUSEUM.

REPORT OF THE CURATOR AND SECRETARY, VICTORIA AND ALBERT MUSEUM, RECEIVED UNDER HIS No. 16, DATED 8TH APRIL 1913.

SIR,

I have the honour to submit the following Annual Report of the Victoria and Albert Museum for the year ending 31st March 1913.

2. The following table gives the comparative attendance of visitors to the Museum during the years 1910-11, 1911-12 and 1912-13 :—

Years.	No. of days the Museum was open.	No. of Visitors in the year.	Daily average.
1910-1911	312	761,722	2,442
1911-1912	313	824,590	2,635
1912-1913	313	822,577	2,628

It will be seen that there has been a slight falling off in the number of visitors to the Museum during the year under report as compared with the previous year. The high figure of 1911-1912 was due to the large influx of visitors to the city on account of the Royal Visit. The number of visitors in the year under report exceeds that of 1910-1911, a normal year, by over 61,000, and the total number of visitors shows a steady increase during the past five or six years.

Museum building.

3. During the year under report, the Executive Engineer's Department of the Municipality repaired and repainted two rooms on the upper floor of the Museum and these rooms are now ready for the exhibitions of collections.

General Equipment.

4. Three new cases were purchased during the year, two being utilised for the Relief Models of Old Bombay now being prepared by the Museum staff. The third will contain articles of copper and brass.

Representations having been made by the Superintendent of Gardens, that valuable specimens are occasionally lost owing to the Museum being closed on Wednesday, it was decided after enquiry to have an Ice-Box made and kept at the Garden Office to preserve the carcasses of animals happening to die on that day.

Natural History.

5. Considerable progress has been made in the work of identifying the collection of shells since my last report, and I hope before the present year is ended that the whole collection will have been identified, labelled and systematically arranged.

Three specimens of shells of the Nautilus—*Nautilus pompilius*—were presented by Mr. F. H. S. Stone, Chief Officer of the S. S. "Arcadia." These show the shell as found in nature, its pearly appearance when polished, the shell sawn through in section to show the siphon arrangement. A short descriptive account and a drawing have been made, the whole forming a very interesting and instructive exhibit.

Two specimens of Dugongs were presented to the Museum by Mr. Cawasji Dinshaw of Aden. The skins were cured and re-stuffed, and the specimens are now exhibited in the Museum in place of the old ones which are removed.

The following carcasses of animals that died in the Garden were received and the skins taken off and cured, a Pintail Duck, a Patridge, a Tigress, a Tucked Booby, an Indian Squirrel, a Hedgehog, a Gazelle, a Spotted Deer, a Victoria Crowned Pigeon and a Panther.

It was decided under orders of the Commissioner to send such of the skins as are not required for Museum purposes to the Storekeeper for disposal.

Archæology.

6. Five photographs of the caves at Elephanta were purchased and added to the collection of Bromide Prints of Rock Cut Caves in Western India. A photograph of the cave at Nasik was taken from a plate in Fergusson's Book on Indian Architecture with a view to complete the collection. A brief account of these caves and a short note on the architecture of the times is in course of preparation.

Old Bombay Room.

Work in connection with the preparation of the Old Bombay Room has occupied a considerable portion of the time of the staff during the year. The two plaster Relief Maps of the Island of Bombay exhibited at the last Bombay Exhibition and presented to the Museum by the Committee were found useless for the purpose. It has therefore been necessary to make new models, for which cases have been ordered.

A large scale map of the Island of Bombay was purchased from the Government Photo-Zinco Press at Poona, and a frame prepared.

A sum of Rs. 800 was sanctioned from the Annual Grant for the purchase of Specimens to meet the cost of purchasing old pictures, engravings, maps and plans of forts of Western India, and of this sum Rs. 670 were expended. These pictures have now been framed and hung on the walls of the Old Bombay Room.

The Commissioner provided an additional sum of Rs. 1,000 to meet the cost of purchasing and framing 126 photographs of Old Bombay collected by Mr. Claridge. These have not yet been delivered but are expected shortly. When framed and hung on the walls of the Old Bombay Room, they together with the prints already there, will form an interesting pictorial history of the city.

Economic Products.

7. Important work done in this section was the collection and exhibition of photographs in the Lacware case. These show the lac insect and the trees on which it deposits the resin. They complete the case.

A box made of the Cocoanut shell at Singapore was presented to the Museum by Mr. F. H. S. Stone.

Industrial Figures.

8. A collection of Industrial Figures showing the different stages in some of the most important industries in the Presidency, have been made and exhibited in a large show case. These number about thirty-two in all and the following are some of the Chief Industries represented : Pottery, Wood-carving, Stone-inlaying, Cloth-dying, Gold and Silver Thread Embroidery, Damascening and Enamelling, Goldsmiths' and Silversmiths' work and Coppersmiths' work.

Geology.

9. The Geological collection was removed into the small cases specially prepared to receive them in a room reserved for this section of the Museum. A single specimen of each of the groups is kept in the cases and the duplicates will be stocked in a cabinet now being prepared to hold them. This arrangement is necessary in view of the limited amount of space available.

Mr. Stone of the S.S. "Arcadia" has presented the following specimens to the Museum :—

1 Specimen of Fossil jaw bone of Ichthyosaurus.
3 Specimens of Ammonites.
2 Do. Sea-Lily.

Office and Library.

10. The usual lists of Specimens, Dead-Stock and Books were furnished to the Office of the Chief Accountant.

The work of printing labels for the different sections in the Museum was continued throughout the year, it having become necessary in the meantime to reprint a considerable number of Geological and Ethnological labels, as the spare stock was eaten by white ants. Over 3,000 new labels were printed, in addition to several long descriptive accounts of exhibits. A large amount of work still remains to be done in the identification and labelling of specimens.

The preparation of Catalogue of the Museum collections has been taken in hand, and has made good progress during the past year.

A valuable collection of books on Old Bombay was purchased and added to the collection of books in the Museum Library. Some of the most important books under this head are the following:—

Baldaeus' East India;
Grose East India;
Burnford Bombay;
Anderson The English in Western India;
Todd's Travels in Western India;

and other books containing plates of interest. Books on Art, Ethnology and Natural History were also purchased. The chief among these are the following:—

V. Smith's History of the Fine Art in India and Ceylon.
Encyclopædia of American Formulas.
Customs of the World, in 26 parts.
Low's History of the Indian Navy.
Costumes of the Marathas.
Hand Book of Indian Arms.
The Genera of Recent Mollusca.
Genera Insectorum, parts 122 to 130.
Journal of Indian Antiquary.

The volumes of the Indian Art Journal were bound together in 19 parts, those missing being presented by the Principal of the School of Art, Bombay.

The volume entitled "Caleoptera" in the series of the Fauna of the British India Series was presented by the Bombay Government.

In conclusion I beg to express my thanks for the great assistance that has been given to the Museum by Mr. F. H. S. Stone, Chief Officer of the S. S. "Arcadia" during the past year. He has not only presented many specimens, but has given a great deal of time to arranging the collections and has displayed the greatest interest in the Museum generally.

I have the honour to be,
Sir,
Your most obedient servant,
CECIL L. BURNS,
Curator and Secretary.

ANNUAL REPORT OF THE GENERAL STORES DEPARTMENT FOR THE YEAR 1912-13.

(*Report of the Storekeeper submitted with his No.* 2964 *of* 31*st May* 1913).

I have the honour to submit the following report on the administration of my Department for the official year 1912-1913.

2. Mr. E. J. Hale, who was in acting charge of this Department, since 1st November 1911, was relieved on 1st May 1912, on which date I was appointed Storekeeper on the increased scale of pay sanctioned under Corporation Resolution No. 4922, dated 27th November 1912. I continued in the appointment till the close of the year.

3. The unprotected state of the yards at the Central Stores and at the B. B. Pipe Depôt referred to in previous reports still continues.

4. Details showing Annual and Special Contracts entered into during the year and the value of the stores purchased and issued during the year together with the opening and closing balances will be found in the Appendices **A** to **D** attached.

5. From Appendix **D** it will be seen that compared with the closing balance on 31st March 1912 there was decrease of Rs. 6,793-0-3 in the value of serviceable new and second-hand stores in hand on 31st March 1913. The total decreases aggregated Rs. 53,130-0-7 of which Rs. 45,380-0-2 was under special Drainage Stores. Against this decrease there was an increase of Rs. 46,337-0-4 of which Rs. 31,017-3-11 was under special Water Works Stores. It is hoped that the stores purchased for the use of Water Department during 1912-1913 will be used up this year on large water works now under construction.

6. The Surplus and Obsolete Stores on hand on 31st March 1913 was Rs. 7,850-0-10 less than on 31st March 1912 due principally to the transfer of the stores of the value of Rs. 6,267-13-11 to "Serviceable Stores" thus amalgamating headings of such stores appearing in more than one account.

7. The increase of Rs. 1,380-14-4 of stores on lines in charge of the different inspectors of the Water Department was due to the Departmental verification of such stores which was considered necessary on their inspection by the Assistant Storekeeper as laid down in addendum to clause 8 of the Stores Manual.

8. During the year the Corporation accorded sanction to the sale of Special Drainage Stores of the book value of Rs. 22,805-13-0. The sale was however not held till the close of the year as some formalities are yet to be gone through.

9. The annual verification of stores in charge of this Department by an outsider was not done this year as it was considered desirable that some time should elapse before a fresh verification was started. It may be stated that the final report on the verification of stores entrusted to Mr. Simkins in December 1911 was submitted in October 1912.

10. The question of appointing an outsider for verifying stores on lines in charge of Water Department was under consideration at the close of the year.

I have the honour to be,
Sir,
Your most obedient servant,

A. G. CHRISTIANSEN,
M.S.E., A.M.I.M.E.,
Storekeeper.

APPENDIX A.

Annual Contracts during 1912-13.

Schedule No.	Articles.	Name of Contractors.
1	Hardware Tools only	Messrs. Hasanalli Adamji & Co.
1A	Hardware other than Tools	,, ,, ,,
1B	Ship Chandlers Stores...	,, ,, ,,
1C	Brushes, Paints, Oils and Paints, &c. ...	,, ,, ,,
1D	Crockery, Lampware, Glassware	,, ,, ,,
1E	Leather, &c.	,, ,, ,,
1F	Metal, Brass and Copper	,, ,, ,,
1G	Iron and Steel	,, ,, ,,
1H	Cutlery	,, ,, ,,
1I	Axes, Pick, Spades, Shovels	,, ,, ,,
1J	Plumbers' Stores, &c.	,, ,, ,,
1K	Harness and Saddlery	,, ,, ,,
1L	Miscellaneous Stores	,, ,, ,,
1M	Petrol	The Asiatic Petroleum Co.
1N	Belting Dicks Patent	Messrs. Hasanalli Adamji & Co.
1O	Tarpaulin Canvas	,, ,, ,,
1P	Pans and Flower Pots, Earthen	,, ,, ,,
2	Iron Castings	,, Richardson and Cruddas.
3	Timber	,, Abdul Rehiman Abdul Jeewa & Co.
4	Benteak and Calicut logs	,, Bhawoo Kashinath & Co.
5	Capes with Caps, water P. coats, &c.... ...	,, ,, ,,
6	Umbrellas, W. P. Globe, Brand, 27"	,, Hasanalli Adamji & Co.
7	Oil, Kerosine, 125°	The Standard Oil Co.
8	,, ,, 150°	,, ,, ,,
9	Oil, Cocoanut	Messrs. Manji Hirji & Co.
10	Oil, Sweet and Castor	,, ,, ,,
11	Cotton waste, white and coloured	,, W. Wolf and Sons.
12	Oil, Cylinder, Heavy Engine, &c.	The Vacuum Oil Co.
13	Oil, Linseed, double boiled, Turpentine ...	Messrs. Turner Morrison & Co.
,,	Turpentine	The Standard Oil Co.
14	Axle Favourite Grease	The Vacuum Oil Co.
15	Canvas and Hose Canvas	Messrs. Hasanalli Adamji & Co.
16	Hose, Canvas, Insurance Brand, 2½"	,, Turner Hoare & Co.
17	Hose, India-rubber, Lined, "Dub Sub", 2½"..	,, Bhawoo Kashinath & Co.
18	Gun Metal and Copper Scraps	,, ,, ,,
19	Lead, Pig	,, Abdulali Karimbhoy & Co.
20	Lead Sheet and Pipe	,, Hasanalli Adamji & Co.
21	Tin, Block and White Metal	,, ,, ,,
22	Iron Bar, Galvanized Iron Plates, Steel, Mild Plates and Bars	,, Abdulali Karimbhoy & Co.
23	Buckets, Galvanized	,, Hasanalli Adamji & Co.
24	Hoes, Iron or Powras...	,, ,, ,,
25	Chain, Iron	,, ,, ,,
26	Wood, fire and charcoal	,, ,, ,,
27	Brooms, Goa and Date and Ribs Brooms ...	,, Bhawoo Kashinath & Co.
28	Baskets, Bamboo and Cane	,, Hasanalli Adamji & Co
29	Leathers	,, ,, ,,
30	Indian-rubber Sheets, Rings, and Washers ...	,, ,, ,,
31	Soaps and Salts	,, ,, ,,
32	Lanterns, Tin and Lamps Hurricane, &c. ...	,, ,, ,,
33	Wick, Cotton and Tape Cotton	,, ,, ,,
34	Nose String, neck Straps and Reins ...	,, ,, ,,
35	Testers, Smoke	,, ,, ,,
36	Shoes, Bullocks, and Nails and Washers for Carts	,, Bhawoo Kashinath & Co.

APPENDIX **A**—*concluded.*

Serial No.	Articles.	Name of the Contractors.
37	Line, Coir	Messrs. Hasanalli Adamji & Co.
38	Ropes and Rubber Hand Coir	,, Bhawoo Kashinath & Co.
39	Rope, Hemp, for Torch Light	,, Hasanalli Adamji & Co.
40	Rope, Manilla	,, ,, ,,
41	Rope, Cotton and Line Log, country... ...	,, ,, ,,
42	Yarn, Hemp and Spun	,, Bhawoo Kashinath & Co.
43	Paints	,, Wilkinson Heywood and Clerk.
44	Paste for removing Paint and Shellac, Bengal.	,, Bhawoo Kashinath & Co.
45	Coal Tar and Dammer	,, Hasanalli Adamji & Co.
46	Files of sorts	,, Macbeth Brothers & Co.
47	Nails and Screws, Iron	,, Hasanalli Adamji & Co.
48	Bolts and Nuts, W. I....	,, ,, ,,
49	Nuts and Rivets, W. I.	,, ,, ,,
50	Packing Karmal	,, D. R. Umrigar, Sons & Co.
51	Packing Asbestos and Tucks, and Water Gaskets	,, ,, ,,
52	Shafts, Wooden, Bhendy for Picks and Powras	,, Bhawoo Kashinath & Co.
53	Valves, Ball Copper, self closing, and reversible, Copper Balls and Brass Levers ...	,, Hasanalli Adamji & Co.
54	Cloth, Dungry...	,, ,, ,,
55	Cumblees, Woollen	,, Bhawoo Kashinath & Co.

A. G. CHRISTIANSEN,
M.S.E., A.M.I.M.E.,
Storekeeper.

APPENDIX B.

List of Special Contracts entered into during 1912-13.

Serial No.	Names of Articles.	Contractors.	Amount.		
			Rs.	a.	p.
1	Sluice Valves, 2", 3", 4" & 6" ...	Messrs. Ewart Latham & Co. ...	1,863	0	2
2	Camel Fire Rubber Lined Hose...	,, Turner Hoare & Co. ...	950	0	0
3	Disinfectants	,, Thomson & Taylor ...	15,000	0	0
4	Hose I. R. Red Grey Non-kinkable, $1\frac{1}{2}$"×5 ply	,, Turner Hoare & Co. ...	1,180	0	0
5	C. I. Pipes and special castings ...	,, Ewart Latham & Co. ...	18,646	9	1
6	Double Valve Hydrants, 200 ...	,, Turner Hoare & Co. ...	7,050	0	0
7	Turnorine Valve Faces	,, ,, ,, ,, ...	3,250	0	0
8	Stoneware Pipes, 4"	,, Hasanalli Adamji & Co....	656	4	0
9	Boots and Woollen Putties ...	,, ,, ,, ,, ...	1,001	7	0
10	Lead Wool	,, Turner Hoare & Co. ...	2,080	0	0
11	Leather Washers for Meters ...	,, John Fleming & Co. ...	1,429	11	0
12	Meter Fittings	,, ,, ,, ,, ...	1,999	10	1
13	Positive Water Meters	,, Turner Hoare & Co. ...	49,517	8	0
14	12", 9" and 6" S. W. Pipes ..	The Universal Agency Co. ...	20,455	11	8
15	12" C. I. Pipes and Bends ...	Messrs. Ewart Latham & Co. ...	6,795	5	0
16	Pesterine	The Asiatic Petroleum Co. ...	8,200	0	0
17	Renewal of Screwing Tackels ...	Messrs. Garlick & Co.	513	4	0
18	Galvanized Pipes and Fittings ...	,, John Fleming & Co. ...	6,749	13	8
19	S. W. Pipes, 6"	The Universal Agency Co. ...	795	13	4
20	First Class Nonkinkable Hose ...	Messrs. John Fleming & Co. ...	1,617	3	0
21	Sleepers, Teakwood, half round...	,, Hasanalli Adamji & Co....	5,950	0	0
22	Light Railway Material	,, Shaw Wallace & Co. ...	1,635	0	0
23	C. I. Pipes, Special Castings, Sluice Valve, &c.	,, Turner Hoare & Co. ...	91,783	12	5
24	Hot Water Boiler	,, ,, ,, ,, ...	577	0	0
25	C. I. Pipes and Bends	,, Richardson and Cruddas..	1,073	3	0
26	Frosts Positive W. Meters ...	,, Balmer Lawrie & Co. ...	15,114	1	0
27	Steel Mild best Channel	,, John Fleming & Co. ...	966	14	0
28	Hose non-kinkable Red Grey $1\frac{1}{2}$"..	,, Macbeth Bros. & Co. ...	1,024	0	0
29	Bolts and Nuts, Hex. 3/8" ...	,, John Fleming & Co. ...	795	0	0
30	Light Portable Steam Pump ...	,, ,, ,, ,, ...	2,660	0	0
31	S. W. Pipes and Fittings ...	The Universal Agency Co. ...	8,288	10	0
32	Wooden Posts and Tin Boxes ...	Messrs. Hasanalli Adamji & Co...	595	0	0
33	S. W. Gully Traps	The Universal Agency	1,680	0	0
34	Frost Meters	Messrs. Garlick & Co.	3,339	0	0
35	3" C. I. Sluice Valves	,, Turner Hoare & Co. ...	550	0	0
36	5" & 6" C. I. Pipes, Sluice Valves Hydrants	,, ,, ,, ,, ...	16,720	3	2
37	Solid drawn Brass Tubes... ...	,, John Fleming & Co. ...	745	0	0
38	Cement	,, Ewart Latham & Co. ...	7,162	8	0
39	C. I. Frames and Covers and Steps for Manhole	Meherally Hirji...	8,793	3	4

A. G. CHRISTIANSEN,

M.S.E.,A.M.I.M.E.,

Storekeeper.

APPENDIX C.

SPECIAL QUOTATIONS INVITED DURING 1912-13.

Serial No.	Articles.	Quantity.	
1	Acid, Hydrochloric	Jars.	34
2	Hose, nonkinkable, 1" in 50 feet lengths	Lengths	2
3	Avery's improved table pattern cement tester	No.	1
	Moulds for the above	,,	5
4	Steam stop valves, 3"	,,	1
	,, ,, ,, ½"	,,	1
5	S. W. T. Junctions	Nos.	56
6	Clocks, Striking	,,	11
7	Pipes, C. I., 9"	,,	4
8	Safe, Fire and Burglar proof	,,	1
9	Native Soil Pans and Traps	,,	4
10	Coats, Cashmere, W. P. with Caps	,,	15
11	Asbestos Wire, Woven square, Packing	Cwts.	2½
12	Acid, Hydrochloric	Jars.	50
13	C. I. Pipes, 9"	Nos.	11
14	Overcoats with Caps for Meat Van Drivers	,,	32
15	San Bon with frames, complete, 15"	,,	1
	Drilling Machine as per illustration	,,	1
	Rachet Braces, 14" with 6 Drills	,,	1
16	Lubricators, Glasses of Sorts	Doz.	18
17	C. I. Sluice Valves, 9" complete	No.	1
18	Weston's Patent Blocks, 8 tons	,,	1
19	Oak, tanned, English leather belting, saw brand, 32'	,,	1
20	Traps, Gully, 6" × 4", half bends	,,	48
	,, ,, ,, full bend	,,	48
21	C. I. Sluice Valves, 9" complete	,,	2
22	,, ,, ,, ,, ...	,,	1
23	Micklin Tyers, 710 × 90	,,	1
	Inner Tubes	,,	2
24	New Copper Pots of sizes	Nos.	30
25	W. I. Fishplate Chairs Spikes	Cwts.	10
26	C. I. Sluice Valve, 9"	No.	1
27	Bassa Broom Ribs	Cwts.	12
28	Lubricator Cup Glasses	Doz.	4
29	Acid, Hydrochloric	Jars.	50
30	Waste not Taps, 1/2"	Nos.	9

A. G. CHRISTIANSEN,
M.S.E., A.M.I.M.E.,
Storekeeper.

APPENDIX D.

Particulars.	General Stores.	Surplus and Obsolete Stores.	Line Suspense Account.	Total.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Value of Stores in hand on 1st April 1912	2,98,762 14 3	34,718 7 7	1,14,951 6 5	4,48,432 12 3
Value of Stores receipts including transfers during 1912-13.	5,95,207 4 5	149 4 9	5,715 3 8	6,01,071 12 10
Total Value ... Rs. ...	8,93,970 2 8	34,867 12 4	1,20,666 10 1	10,49,504 9 1
Less—				
Value of Stores issued including transfers during the year 1912-13.	6,01,874 8 11	7,999 5 7	4,334 5 4	6,14,208 3 10
Balance ...	2,92,095 9 9	26,868 6 9	1,16,332 4 9	4,35,296 5 3
Add—				
Discrepancies adjusted as per Clause 29 of the Stores and Stores Manual against rate adjustment Account ...	125 11 9	....	.....	125 11 9
Value of Stores on the 1st April 1913	2,91,969 14 0	26,868 6 9	1;16,332 4 9	4,35,170 9 6

A. G. CHRISTIANSEN,
M.S.E., A.M.I.M.E.,
Storekeeper.

LICENSE DEPARTMENT.

REPORT OF P. P. VAGH, ESQ., SUPERINTENDENT OF LICENSES, FOR THE YEAR 1912-13, SUBMITTED UNDER No. 2774, DATED 15TH MAY 1913.

1. I have the honour to submit my Administration Report, on the working of the License Department, for the year 1912-1913.

2. I was appointed to act for the Municipal Secretary from 18th September to 16th December 1912, during which period Mr. A. H. Underdown held charge of this office.

3. During the year under report 8,336 licenses were issued, the total revenue collected being Rs. 1,09,896, *vide* attached statements marked A, B & C. This gives an increase of 217 in the number of licenses and of Rs. 9,410 in the revenue over the figures for the preceding year and of 1,367 licenses and of Rs. 27,826 over the average of the last ten years.

4. The fees remaining to be recovered for the year amounted to Rs. 1,252-12-0 as detailed below :—

Ward.	No. of Cases.	Total Amount. Rs. a. p.
A	2 ...	17 8 0
B	17 ...	358 8 0
C	11 ...	73 0 0
D	10 ...	120 8 0
E East	20 ...	286 4 0
E West	9 ...	136 0 0
F	29 ...	204 0 0
G	5 ...	57 0 0
	103	Rs. 1,252 12 0

5. The miscellaneous receipts amounted to Rs. 95 as detailed below :—

	Rs. a. p.
For the production of records in Courts, &c. ...	34 0 0
For duplicate copies of licenses, &c.	5 0 0
Sale-proceeds of old records and empty inkbottles.	56 0 0
Total Rs.	95 0 0

6. E Ward is very extensive in area and the licensing work in it was found too heavy for an Inspector to satisfactorily manage it. Consequently an additional Inspector was temporarily sanctioned and the work of the Ward was divided between two Inspectors since 15th May 1912. The result was so satisfactory that in addition to the better control that was exercised on all licensable commodities or trades there was an increase of revenue of Rs. 3,272 in 10½ months against the extra expenditure of Rs. 1,224 per annum.

7. The revised Bye-laws in respect of Milch cattle stables as well as Horse and Bullock stables which were under the consideration of the Corporation last year were being reconsidered by that body in consequence of a note written on the subject by Mr. J. P. Orr, Chairman of the City Improvement Trust.

8. Action is continued to close or improve insanitary stables. The stable in 2nd Panjrapole Street belonging to Mr. Suleman Allibhoy Isub, which stands on the Panjrapole land was condemned by the Health Department. As the lease was to expire on 31st October 1912 it was licensed up to that date and thereafter it was vacated.

9. The Panjrapole Trustees have since leased the stable to a Pardeshi by name Raghubir Tillochand Pandy who having kept a few buffaloes was convicted and fined twice by the 3rd Presidency Magistrate. Action will be continued until the stable is vacated.

10. Ghee is the only new article introduced in Section 394 as amended by Act No. II of 1911 for which licenses have not yet been issued. A license form has been drawn up and steps will be taken to require licenses from the current official year.

11. Bakeries and Aerated water factories were licensed for the first time. Several places have been condemned by the Health Department and the licensing of 217 bakeries and 19 aerated water factories was pending disposal at the end of the year the numbers of those licensed being 54 and 34 respectively.

12. The license fees for charcoal, coal and coke, firewood, hay, oil petroleum, soap and milch cattle stables were revised during the year.

13. The License Department is not looked upon as a Revenue earning Department but the actual receipts since the Department was created in 1890 will show that license fees have contributed in no small degree to the total income of the Municipality. The question whether the rates of License fees weigh heavily on any trades and whether the license revenue could be brought down to a point nearer the expenditure was under the consideration of the Commissioner in November 1912 and on 6th February 1913 the Corporation passed the following Resolution :—

"That the Commissioner be requested to report whether the present scale of license fees can be reduced on certain articles with due regard to the expenditure necessary for controlling dangerous and offensive trades and operations."

14. The total number of prosecutions during the year against persons carrying on trades, subject to licenses, without licenses and for infringing the conditions of licenses was 3,564. In 794 cases out of these, fines were inflicted by the Presidency Magistrates. The total fines amounted to Rs. 13,624-14-0 giving an average of Rs. 17-2-6 per case against Rs. 9,150-8-0 in 1911-12 and Rs. 3,056-6-0 the average of the preceding 10 years. The fines imposed during the year were the largest since 1890-1891. Prosecutions for infringement of license conditions had to be given up during the last 8 months of the year owing to the detection of an accidental omission of words "and in conformity with the terms and conditions of" from Section 394 as amended by Act No. II of 1911 otherwise the fines would have been still larger.

15. It is to be noted with regret that Senior Inspector Mr. James Clarke, who was connected with this office since 1900, died on 23rd February 1913.

I have the honour to be,
Sir,
Your most obedient servant,

P. P. VAGH,
Superintendent of Licenses.

A

Yearly total of License Fees recovered during 1912-1913.

No. of Licenses issued.	Nature of Trade.	License fees.	
		Rs.	a.
35	Aerated Water (manufacturing)	1,070	0
8	Ashes	85	0
58	Bakeries...	1,795	0
3	Bones	60	0
6	Bricks (manufacturing) (hand-made)	60	0
3	Candles do.	75	0
13	Carbide of Calcium	245	0
2	Catgut	30	0
713	Charcoal	4,778	0
267	Chemical preparations	4,115	0
80	China grass	107	0
293	Coal and coke	3,940	0
57	Cocoanut fibre, Flax, Hemp, and Jute	856	4
43	Cotton (cleaning)	1,276	4
219	Cotton refuse, seed or waste	5,277	8
33	Cowdung cakes (manufacturing)	469	0
224	Cloths in Indigo and other colours Dyeing (hand power)	2,095	0
13	Do. do. do. (mechanical power) ...	610	0
60	Dammer, Tar or Pitch	1,280	0
1	Dynamite	50	0
39	Fat and Tallow	573	12
6	Fins (dried)	90	0
23	Fish, do.	475	0
131	Fireworks (retail)	655	0
13	Do. (wholesale)	600	0
281	Firewood (retail)	562	0
899	Do. (wholesale)	10,765	0
7	Gas (manufacturing)	350	0
3,530	Carried over ...	42,344	12

Yearly total of License Fees recovered during 1912-1913—*contd.*

No. of Licenses issued.	Nature of Trade.	License fees.	
		Rs.	a.
3,530	Brought forward ...	42,344	12
64	Gunpowder (retail)	320	0
2	Gunpower (wholesale)	100	0
4	Hair	60	0
243	Hay, Straw and Grass	4,986	4
14	Hides and skins dried	210	0
46	Do. do. (raw)	5,650	0
24	Horns and Hoofs	625	0
74	Kerosine oil (retail)	370	0
72	Do. (wholesale)	3,509	0
27	Lime for burning (lime kiln)	1,350	0
718	Matches (retail)	1,071	8
36	Do. (wholesale)	1,730	4
2	Do. (Bengal lights)	68	0
197	Metals (casting)	2,791	4
504	Oil (keeping)	9,022	8
1	Paper (manufacturing)	15	0
89	Permits under Section 390	2,225	0
305	Do. do. do. do. (renewal)	305	0
2	Petroleum (non-dangerous) (under Petroleum Act)	70	0
51	Do. (dangerous) (under Petroleum Act)	153	0
26	Pottery (manufacturing)	130	0
8	Rags	120	0
20	Saltpetre	100	0
20	Smelteries	240	0
19	Soap (manufacturing)	295	0
30	Sugar Refineries	735	0
77	Stables for Horses	3,235	0
6,205	Carried over...	81,831	8

Yearly total of License Fees recovered during 1912-1913.—*concluded.*

No. of Licenses Issued.	Nature of Trade.	License Fees.
		Rs. a.
6,205	Brought forward ...	81,831 8
84	Stables for milch cattle	7,630 0
89	Do. Bullocks	1,730 0
11	Do. for other four-footed animals	15 0
1,569	Timber	13,600 8
105	Turpentine (retail)	525 0
39	Do. (wholesale)	585 0
33	Whistles (steam)	330 0
49	Wool	1,315 0
8,184	Total Rs. ...	1,07,562 0

B

Statement showing the amount of License Fees for 1911-1912 recovered in 1912-1913.

No. of Licenses Issued.	Nature of Trade.	License Fees.
		Rs. a.
1	Bricks (manufacturing) (hand-made)	10 0
10	Charcoal...	117 0
2	Cloths in indigo and other colours dyeing (hand-power)	20 0
1	Cloths in indigo and other colours dyeing (mechanical power) ...	50 0
7	Coal and coke	70 0
3	Cotton (cleaning)	105 0
10	Cotton seed, refuse, waste	230 0
4	Dammer, tar or pitch	100 0
1	Fish (dried)	25 0
25	Firewood (wholesale)	220 0
3	Gunpowder (retail)	15 0
1	Do. (wholesale)	27 0
1	Hair	15 0
69	Carried over ..	1,004 0

No. of Licenses Issued.	Nature of Trade.	License Fees.
		Rs. a.
69	Brought forward ...	1,004 0
12	Hay, straw and Grass	235 0
4	Hides and Skins (dried)	200 0
2	Metal (casting)	60 0
5	Oil (keeping)	90 0
1	Permit under Section 390 (renewal)	1 0
1	Petroleum (dangerous)	3 0
1	Stable for bullocks	10 0
53	Timber	700 0
1	Turpentine (retail)	5 0
1	Do. (wholesale)	15 0
1	Wool	10 0
151	Total... ...	2,333 0

C

Statement showing the amount of License Fees for 1910-11 recovered in 1912-13.

No of Licenses Issued.	Nature of Trade.	License Fees.
		Rs. a.
1	Permit under Section 390 (renewal)	1 0
1	Total... ...	1 0

Summary of Income for 1912-1913.

No. of Licenses Issued.	Official year during which collection was made.	License Fees.	Remarks.
		Rs. a.	
1	Income for 1910-11, collected during the official year 1912-13	1 0	*Vide* statement **C.**
151	Income for 1911-12, collected during the official year 1912-13	2,333 0	Do. **B.**
8,184	Income for 1912-13, collected from 1st April 1912 to 31st March 1913	1,07,562 0	Do. **A.**
8,336	Total	1,09,896 0	

P. P. VAGH,
Superintendent of Licenses.

MARKETS.

REPORT OF THE SUPERINTENDENT OF MARKETS AND SLAUGHTER HOUSES RECEIVED UNDER HIS No. 823, DATED 9TH JUNE 1913.

SIR,

I have the honour to submit the Annual Report of the Market and Slaughter Houses for the year 1912-13.

2. I am glad to be able to report that the total revenue from the Markets and Slaughter Houses during the year under report amounted to Rs. 5,81,035-5-2 against Rs. 5,45,836-5-9 in the previous year. This shows an increase of Rs. 35,198-15-5 in the revenue. This increase is chiefly under the heads of "Stall Rents" and "Slaughter fees." The following are the contrasted statements marked A to E showing the receipts in detail under the various Heads, with the reasons for the increase :—

A

Statement of stall rents in detail, during the year under report, contrasted with those in the previous four years :—

Names of the Markets.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	Difference as compared with 1911-12. Increase.	Difference as compared with 1911-12. Decrease.	REMARKS.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Colaba Market	810 1 0	488 14 0	537 10 0	413 1 0	588 11 0	....	25 6 0	
Fort Market	6,471 10 0	6,088 14 0	5,733 8 0	6,900 4 0	6,433 2 0	.....	468 2 0	
A. O. Fruit and Vegetable Market ...	58,136 15 0	57,986 8 9	63,103 2 0	64,809 9 0	76,461 0 8	11,651 7 8	...	
Do. Fish and Mutton Market ...	7,143 2 0	7,637 1 0	8,397 10 0	8,347 13 0	8,776 4 0	428 7 0	...	
Do. Mutton (New) Market	2,431 3 0	2,548 9 0	2,658 4 0	2,569 9 6	2,745 7 0	176 10 6	...	
Do. Beef Market	10,727 12 0	10,875 6 0	10,800 0 0	10,752 0 0	11,701 8 0	949 8 0	...	
Godowns	6,132 0 0	5,484 3 0	5,836 0 0	5,197 14 0	6,763 13 0	1,565 15 0	...	
Fowl Rooms	3,660 9 0	3,660 0 0	2,818 0 0	2,694 11 0	3,019 2 0	324 3 0	...	
Bird Shops	.....	.....	1,067 0 0	1,805 7 0	1,895 7 0	90 7 0	...	
Erskine Road Fruit and Vegetable—								
Do. (Old) Market ...	24,910 0 0	24,328 9 6	25,464 0 9	27,665 6 6	31,990 8 0	4,325 1 6	...	
Do. (New) Market ...	6,194 8 0	4,676 2 0	4,805 12 0	4,566 15 0	4,969 0 0	402 1 0	...	
Do. Mutton Market ...	7,695 0 0	7,442 5 0	7,496 6 0	7,789 5 0	7,867 5 0	78 0 0	...	
Bhuleshwar Market	12,370 8 0	12,715 3 3	12,706 12 0	14,788 5 0	15,184 9 0	396 4 0	...	
Pedder Market	1,305 13 0	1,452 2 0	1,446 0 0	1,362 0 0	1,348 15 0	.....	13 1 0	
Kamathipura Market	.....	.....	.....	.....	2,053 13 0	2,053 13 0	...	Opened from
Pork Market	100 0 0	100 0 0	100 0 0	100 0 0	100 0 0	.....	...	1st April
DeLisle Road Sheep Market	7,347 10 0	7,346 0 0	7,346 0 0	7,413 8 0	7,300 7 0	.....	112 1 0	1912.
Fergusson Road Market	1,276 0 0	1,379 3 0	1,291 5 0	1,612 10 0	1,668 11 0	56 1 0	...	
Parbhadevi Road Market	958 8 0	499 0 0	668 6 0	683 6 0	654 14 0	.....	28 8 0	
Elphinstone Road Market	1,553 0 0	1,485 4 9	1,499 14 0	1,817 11 3	1,820 9 0	2 13 9	...	
Forna Road Market	999 0 0	1,020 3 3	944 14 0	.....	.....	.....	...	
Total ...	1,59,633 0 6	1,57,054 8 0	1,61,949 7 9	1,70,787 7 3	1,92,640 1 8	22,499 12 5	647 2 0	
Increase over preceding year's rent...	2,627 5 8	.....	7,194 15 9	6,537 15 6	21,852 10 5	.....	...	
Decrease below do. ...	.....	2,568 8 6	.....	.....	.....	.....	...	

3. The above statement will show an increase of Rs. 21,852-10-5 in stall rents. This is chiefly due to the rents of the Crawford and the Erskine Road Markets, which were considered inadequate, having been revised. The new market at Kamatipura opened on 1st April 1912 and the Foras Road Market was closed, the squatters and the stall-holders in that market having been given the preference of occupying stalls in the new market.

B

Statement showing the squatters' fees from Municipal Fish Markets, Scale Fees in the Crawford Market compound, and the Fair Ground Rent and Feeding Fees at the Bandora Slaughter Houses, recovered from the contractors during the year under report, contrasted with those in the previous four years.

Particulars.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	Difference as compared with 1911-12.	
						Increase.	Decrease.
	Rs.	Rs.	Rs. a.	Rs. a.	Rs.	Rs. a.	Rs.
Fort Market	1,950	1,925	1,925 0	1,950 0	1,750	.....	200
A. C. Beef and Fish Markets	9,000	9,000	9,100 0	9,500 0	9,000	.....	500
Erskine Road Fish Market.	19,100	20,500	23,550 0	24,400 0	25,500	1100 0	...
Pedder Market	1,600	1,500	1,500 0	1,825 0	1,925	100 0	...
Kamatipura Market ...	...	...	.....	.....	1,600	1,600 0	...
Colaba Market	1,000	1,100	1,100 0	1,150 0	1,225	75 0	...
Fergusson Road Market ..	1,550	1,200	1,600 0	1,650 0	1,550	.....	100
Parbhadevi Road Market.	750	750	750 0	800 0	950	150 0	...
Elphinstone Road Market.	625	720	850 0	775 0	825	50 0	...
Foras Road Market ...	Fees	collected	departmentally.	Market	closed on	31st March	1912.
Total Squatters' Fees ...	35,575	36,695	40,375 0	42,050 0	44,325	3,075 0	800
Scale fees at the A. C. Market compound ...	6,100	3,200	5,233 4	7,800 0	5,600	.....	2,200
Fair ground rent and feeding fees	76,000	71,000	71,000 0	80,200 0	79,700	.....	500
Grand Total	1,17,675	1,10,895	1,16,608 4	1,30,050 0	1,29,625	3,075 0	3,500
Increase over preceding year's amount	...	...	5,713 4	13,441 12	...	.....	...
Decrease below preceding year's amount	11,375	6,780	.....	.....	425	.....	...

4. From the above statement it will appear that the total realizations from the contractors shew a very slight decrease of Rs. 425. But considering the receipts for the previous four years, this slight decrease is insignificant.

C.

Statement shewing the squatters' fees collected departmentally in the several Municipal Markets during the year under report contrasted with those in the previous year:—

Names of the Markets.	1912-13.	1911-12.	Difference.		Remarks.
			Increase.	Decrease.	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Colaba Market	93 4 0	3 0 0	90 4 0	.....	
Fort Market	.....	160 7 6	.....	160 7 6	
A. C. Fruit and Vegetable Market ...	159 15 0	139 0 0	20 15 0	.....	
Erskine Road Old Fruit and Vegetable Market	1,168 12 0	450 4 0	718 8 0	.....	
Bhuleshwar Market	1,192 3 0	1,416 2 6	.....	223 15 6	
Pedder Market	4 0 0	.....	4 0 0	.....	
Foras Road Market	*4 0 0	1,574 11 6	.....	1,570 11 6	
Fergusson Road Market	2,205 8 0	1,801 1 6	404 6 6	.....	
Parbhadevi Road Market	1,244 8 0	950 3 0	294 5 0	.....	
Elphinstone Road Market	338 7 0	188 14 0	149 9 0	.....	
Kamatipura Market	46 14 0	.....	46 14 0	.....	
Total ..	6,457 7 0	6,683 12 0	1,728 13 6	1,955 2 6	
				Rs.226 5 0	net decrease

* Fees recovered on 31st March 1912 credited on 1st April 1912.

5. If the daily fees amounting to Rs. 1,574-11-6 recovered in the previous year from the Foras Road Market were deducted from the total receipts for all the markets in that year, the amount realized during the year under report will show an increase of Rs. 1,348-6-6. This shows that efforts were made to induce the squatters in the vicinity of the markets, first to take their sittings in the market on payment of the usual squatters' fees and then to take stalls on the quarterly rentals. The statement in the margin will shew the average number of stalls vacant in each quarter during the year under report as compared with those in the previous year. On the opening of the Kamatipura Market on 1st April 1912, the Foras Road Market was closed.

Names of the Markets.	Total number of stalls.	Average No. of stalls vacant in each quarter in 1912-1913.	Average No. of stalls vacant in each quarter in 1911-12.	Remarks.
Colaba Market	70	56	58	
Fort Market..	266	95	83	Rent collected half yearly.
A. C. Fruit and Vegetable Market	360	[illegible]	44	
A. C. Fish and Mutton Market	119	47	47	
A. C. Mutton (New)	68	24	23	
A. C. Beef Market..	81	1	1	
Godowns	26	....	1	
Fowl Rooms..	27	....	1	
Bird shops	18	4	6	
Erskine Road Fish and Vegetable Market, old	451	54	55	
Do. do. do. do. new.	118	53	59	
Erskine Road Mutton Market.	114	37	36	
Bhuleswar Market..	176	11	14	
Pedder Market	40	8	7	
Pork Market	2	....	....	Rent collected yearly.
Delisle Road Sheep Market	50	1	....	Rent collected half-yearly.
Fergusson Road Market	31	1	....	
Elphinstone Road ,, ...	45	14	14	
Parbhadevi Road ,, ...	25	4	1	
Kamatipura Market	46	7	....	Opened on 1st April 1912.
Total ..	2,335	447	443	

D

Comparative Statement showing the Revenue from other sources, comprising the heads "Verifying Weights and Measures, Garden Produce, Prices Current, &c."

Particulars.	1912-13.	1911-12.	Difference. Increase.	Difference. Decrease.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Verifying weights and measures..	1,395 8 6	1,628 14 6	.....	233 6 0	
Garden produce	10 0 0	8 1 0	1 15 0	.....	
Prices Current	90 9 0	110 13 0	.....	20 4 0	
Sale-proceeds of meat or animals seized under Section 412 ...	66 4 0	68 10 0	.....	2 6 0	
Sale-proceeds of meat vans cast bullocks	.....	276 3 0	... ..	276 3 0	
Sale-proceeds of manure ...	55 8 0	54 0 0	1 8 0	.....	
For producing office records, Inspection fees, &c.	5 0 0	1 0 0	4 0 0	.....	
For tapping date trees at Bandra	.....	7 8 0	.....	7 8 0	
Sale-proceeds of Copies of Bye-laws	0 4 0	0 10 0	.....	0 6 0	
For the right of removing dead animals from the Slaughter Houses compound	180 0 0	180 0 0	.....	.....	
Miscellaneous	46 4 0	367 12 0	.....	321 8 0	
Total ...	1,849 5 6	2,703 7 6	7 7 0	861 9 0	

6. The above statement calls for no remarks.

E

Slaughter fees, Butchers' License fees, &c.

Particulars.	1912-13.	1911-12.	Difference. Increase.	Difference. Decrease.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Slaughter fees	2,25,497 15 0	2,11,899 7 0	13,598 8 0	... ..	Net Increase Rs. 14,851-12-0.
License fees	17,067 8 0	17,452 0 0	.....	384 8 0	
Ground rent	264 0 0	221 0 0	43 0 0	.....	
Chawl rent	2,874 0 0	2,879 4 0	... .	5 4 0	
Proceeds of blood from the contractor	4,760 0 0	3,160 0 0	1,600 0 0	.....	
Grand Total ...	2,50,463 7 0	2,55,611 11 0	15,241 8 0	389 12 0	

7. The receipts from slaughter fees in the above statement show a very large increase of Rs. 13,598-8-0. This is due to the fact that a considerably large number of horned cattle was brought to Bandora for disposal on account of famine. This would indicate that the famine caused much compulsory slaughter of stock. There was a scarcity of sheep and goats during the monsoon, and consequently the price of meat was somewhat higher than usual. The marginal statement shews the number of animals slaughtered during the year under report, as compared with those in the previous year.

Description of animals.	Number slaughtered in 1912-13.	Number slaughtered in 1911-12.	Increase.	Decrease.
Buffaloes	7,939	7,908	31	...
Cows, Bullocks and Calves..	54,155	41,215	12,905	...
Sheep and Goats	688,519	693,688	...	5,169
Pigs (at Sonapur Slaughter House)	591	481	412	...
Do. Do. Do.	145			
Sucklings	157			

The proceeds of blood also show a large increase.

8. The total receipts under all the heads shown in the foregoing statements A to E come to Rs. 5,81,035-5-2 during the year under report against Rs. 5,45,836-5-9 in the previous year, showing an increase of Rs. 35,198-15-5 already noted in para 2.

9. In the following statement is shown the financial results of the working of each Market during the year under report, that is, gross receipts, expenditure and the percentage on the original cost of the market building, *plus* the cost of any addition made to the building during the year :—

Name of the Markets.	Original Cost.	Addition if any made during the year.	Total Cost.	Gross Receipts.	Expenditure.	Net Receipts.	Percentage in the Cost.	Remarks.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs.	
[illegible] Market	93,393 0 0	....	93,393 0 0	1,704 15 0	1,464 7 6	240 7 6	·25	
Fort do.	122,600 0 0	....	1,22,600 0 0	8,182 2 0	2,990 10 10	5,191 7 2	4·23	
Crawford Markets (for structures only)	7,08,357 0 0	....	7,08,357 0 0	1,26,122 8 8	35,857 6 3	90,265 2 5	12·74	
Erskine Road Market	5,82,406 0 0	....	5,82,406 0 0	71,495 9 0	11,996 12 3	59,498 12 9	10·21	
Bhuleshwar do.	2,17,596 0 0	....	2,17,596 0 0	16,376 12 0	2,892 11 5	13,484 0 7	6·19	
Pedder do.	52,630 0 0	....	52,630 0 0	3,277 15 0	3,166 10 3	111 4 9	·21	
Fork do.	5,500 0 0	....	5,500 0 0	100 0 0	173 15 11	73 15 11 loss.	1·34 loss.	
D'Lisle Road Sheep Market ..	25,000 0 0	....	25,000 0 0	7,300 7 0	3,245 1 11	4,055 5 1	16·22	
Pergusson Road do.	22,669 0 0	....	22,669 0 0	5,414 3 0	2,227 12 3	3,196 6 9	14·10	
Jamshedevi Road do.	18,894 15 1	...	18,894 15 1	2,849 6 0	2,037 5 5	812 0 7	4·29	
Elphinstone Road do.	29,266 15 4	....	29,266 15 4	2,484 0 0	2,132 12 7	351 3 5	1·20	
Kalyanipura do.	50,691 0 0	....	50,691 0 0	3,704 11 0	1,963 8 9	1,741 2 3	3·43	This includes Rs. 4 recovered from the Foras Road Market on 31-3-12 and credited on 1-4-12 in the accounts for 1912-13.
Total ..	19,29,003 14 5	...	19,29,003 14 5	249,022 8 8	70,149 3 4	1,78,947 5 3 73 15 11	.... *Deduct loss.*	
						1,78,873 5 4		

10. On reference to the above statement, it will appear that the Colaba Market is a total failure. This is on account of the situation of the market being unfavourable. As a matter of fact, such a costly market was not needed in the locality, and a small market costing about Rs. 20,000, would have served the purpose. However efforts are being made to fill in as many of the vacant stalls as possible by inducing the squatters in the vicinity to occupy them and to make the market popular. This might slightly improve the present state of the market.

11. The Crawford Markets, Erskine Road Markets, DeLisle Road Sheep Market and the Fergusson Road Market, call for no remarks. The financial result of the working of each of these markets is very favourable.

12. The Bhuleshwar Market also shews a good result, notwithstanding the fact that there are a large number of squatters in the vicinity of the market, particularly in the Panchayatwadi Lane, and in consequence thereof the stall-holders in the market have to suffer a great deal.

13. In regard to the Fort Market, the Pedder Market and Parbhadevi, Elphinstone Road and Kamatipura Markets, Mr. Michael, on his return from leave, will be able to report as to whether steps can be taken to revise the present rents, so as to improve the financial results of the working of these markets.

14. The Pork Market shows a loss of 1·34 per cent. on the cost. But the market building consists of a small slaughter-house also which yielded an income of Rs. 591 during the year for slaughtering pigs. If this amount is also taken into consideration along with the rents, the percentage on the cost of the whole building will be 9·4.

15. During the year under report 7,922 buffaloes, 57,329 horned cattle, and 747,616 sheep and goats were brought to the Bandora Fair ground for examination and disposal, out of which number 33 buffaloes, 2,018 horned cattle and 19,699 sheep and goats were found on inspection to be unfit for slaughter and were consequently rejected, *vide* the following comparative statement. The remainder were either slaughtered for the markets or were otherwise disposed of, the details of which are shown in Appendix **A** :—

Year.	Animals brought to the Fair ground.			Animals rejected.		
	Buffaloes.	Horned Cattle.	Sheep and Goats.	Buffaloes.	Horned Cattle.	Sheep and Goats.
1912-13 ...	7,922	57,329	747,616	33	2,018	19,699
1911-12 ...	7,981	44,648	770,479	24	1,656	18,664

16. During the year under report, 700 mutton carcasses and 57 beef carcasses were found cystic or diseased on inspection at Bandora and were consequently destroyed.

17. The fines inflicted by the Presidency Magistrates for the infringement of the Municipal Act and the Bye-laws during the year amounted to Rs. 1,374-14-0 against Rs. 1,995-14-0 in the previous year. The total amount of fines includes Rs. 1,358-6-0 for the importation of contraband meat, the balance Rs. 16-8-0 being for importing live animals in contravention of Sec. 412 (1).

18. Steps were taken as usual to destroy articles of food exposed for sale in the different Markets that were found unwholesome. The following table gives the figures of the various articles destroyed during the currency of the year under report :—

Meat	19,181	lbs.
Fish	207,021	,,
Fruit	10,521	,,
Vegetable	18,034	,,
	254,757	lbs.

19. The quantity of contraband meat seized and destroyed during the year under report was 6,726 lbs. against 28,696 lbs. in the previous year. The great reduction in the quantity of Coorla meat seized shows that the additional powers obtained by the amendment of the Municipal Act have proved very successful in stopping the import of Coorla meat. 170 convictions were obtained during the currency of the year against 108 in the previous year. The increase in the number of convictions was due to the persons bringing in meat in small quantities, that is, under 20 lbs. being prosecuted also in the usual way, instead of being let off after destroying the meat as was done in the previous year.

20. The beef supply was plentiful and cheap during the year under report, owing to a considerably large number of cattle having been brought to Bandora on account of the famine. But the supply of mutton was somewhat scarce during the monsoon on account of the scarcity of animals. The fruit and vegetable supply was as usual up to the mark.

21. During the year under report, the Milk Market at Ali Umer Street was for the first time brought under a license on charging the License fee of Rs. 25 per annum with the approval of the Corporation.

I have the honour to be,
Sir,
Your most obedient servant,
R. G. ROBOTTOM,
Ag. Superintendent of Markets.

APPENDIX A.

STATEMENT showing the number of Animals slaughtered, and removed for private slaughter, etc., during the year 1912-1913.

Description of Animals.	Months.												Total number of Animals slaughtered.	Total amount of slaughter Fees.	REMARKS.
	April 1912.	May 1912.	June 1912.	July 1912.	August 1912.	Sept. 1913.	Oct. 1912.	Nov. 1912.	Dec. 1912.	Jan. 1913.	Feb. 1913.	March 1913.			
														Rs. a. p.	
Buffaloes	668	849	818	977	957	805	680	576	501	375	339	394	7,939	79,390 0 0	
Cows	3,267	2,999	3,173	2,739	2,479	2,526	3,523	4,060	4,669	4,814	4,007	4,276	42,532	31,899 0 0	
Bullocks	819	660	567	638	628	604	987	1,198	1,453	1,600	1,058	1,030	11,142	8,356 8 0	
Calves	3	.....	13	10	10	24	38	52	70	71	95	96	481	360 12 0	
Sheep, Goats, &c., for Bombay	58,310	53,107	52,238	52,409	52,929	54,389	53,027	55,727	57,715	51,815	47,387	53,651	642,704	80,338 0 0	
Do. do. Mahim	1,973	2,052	2,125	2,012	1,913	1,898	1,715	1,981	2,371	2,082	1,660	1,956	23,738	1,483 10 0	
Do. do. Bandora	2,022	2,013	1,963	1,830	1,907	2,104	1,733	1,898	2,000	1,740	1,358	1,509	22,077	1,379 13 0	
Pigs at Sonapore	46	36	38	40	38	37	41	38	68	45	72	92	591	591 0 0	
Do.	**19**	**9**	**24**	**24**	**10**	**18**	**16**	**10**	**5**	**9**	**1**	**0**	**145**	**290 0 0**	Sucking-pigs.
Sucking pigs...	**19**	**18**	**5**	**7**	**5**	**13**	**33**	**21**	**5**	**17**	**6**	**8**	**157**	**39 4 0**	
Live Horned Cattle brought to Bombay...	47	100	76	59	89	241	104	132 Includes one Buffalo.	51	78	85	103	1,065 Includes one Buffalo.	5,330 0 0 Includes one Buffalo.	
Live Sheep, Goats, &c., brought to Bombay	348	401	351	553	161	264	506	1,347	240	326	241	292	5,030	2,515 0 0	
	8	**6**	.....	**3**	**6**	**5**	**2**	**2**	.....	.....	**4**	**3**	**39**	**19 8 0**	
Live Sheep, Goats, &c., removed by De-Lisle Road Sheep Market Fadkarees ...	1,759	1,612	2,193	2,390	2,454	2,165	2,166	3,651	2,291	1,817	1,697	2,816	27,011	13,505 8 0	
												Total ...	784,651	2,25,497 15 0	

The figures in (Block Type) show the number of animals slaughtered in Bombay by private individuals within the meaning of Section 403 (3)(c) of the Act.

R. G. ROBOTTOM,
Ag. Superintendent of Markets.

EDUCATIONAL.

REPORT OF THE SCHOOLS COMMITTEE FORWARDED BY THE COMMITTEE'S SECRETARY UNDER HIS No. 1410 OF 20TH MAY 1913.

THE SCHOOLS COMMITTEE'S OFFICE,
BOMBAY, *8th May* 1913.

REPORT ON THE ADMINISTRATION OF THE SCHOOLS COMMITTEE FOR THE YEAR 1912-1913.

Constitution of the Committee.

At the opening of the year, the Committee consisted of the following Members :—

The Hon. Mr. C. H. Setalvad, B.A., LL.B.
The Hon. Sir Ibrahim Rahimtoola, Kt., C.I.E.
D. E. Wacha, Esq.
James MacDonald, Esq.
Rao Bahadur Dhakji Cassinathji.
Kazi Kabiruddin, Esq., Bar.-at-Law.
N. V. Mandlik, Esq., B.A., LL.B.
Dr. Jehangir J. Cursetji, M.D.

As required by Section 39 (3) of the Bombay Municipal Act, the two Senior Members, who retired from the Board, were Messrs. Kazi Kabiruddin and N. V. Mandlik, and they were re-appointed by the Corporation.

The Hon'ble Mr. Setalvad was unanimously re-elected Chairman for the year.

Finance.

The opening balance of the School Fund was Rs. 73,102. The receipts from all sources amounted to Rs. 3,68,837 against Rs. 3,65,197 for the previous year. The total expenditure was Rs. 3,78,088, being Rs. 39,825 over that for the year 1911-1912. The increase was principally due to the opening of new schools, the employment of additional teachers in old schools, provision of better quarters for some schools and the consequent increase in rent, the registration of new schools for grant-in-aid, and the re-assessment of the grant of some of the Schools already on the Register.

The cost per pupil was Rs. 19·9 as against Rs. 18·7 last year, and it was distributed as under :—

Teaching	Rs.	11·6
Rent	„	5·1
Miscellaneous	„	3·2
Total	Rs.	19·9

The increase was chiefly on account of rent and miscellaneous charges,

Municipal Schools.

The following table gives a summary of the total number of Municipal Schools of all descriptions, with the aggregate attendance thereat for the past two years :—

Classes of Schools.	Municipal.			
	1911-1912.		1912-1913.	
	Schools.	Pupils.	Schools.	Pupils.
Marathi.				
Day Schools—				
Middle Schools	3	205	3	219
Primary for boys	46	6,142	52	6,716
Do. for girls	16	1,640	18	1,695
Total of Marathi Schools ...	65	7,987	73	8,630
Gujarati.				
Day Schools—				
Middle Schools	1	72	1	50
Primary for boys	25	2,527	27	2,563
Do. for girls	11	1,450	14	1,420
Total of Gujarati Schools ...	37	4,049	42	4,033
Urdu.				
Day Schools—				
Middle Schools	...	...	...	...
Primary for boys	34	3,361	39	3,604
Do. for girls	3	388	3	368
Total ...	37	3,749	42	3,972
Night Schools	3	76	3	111
Total of Urdu Schools ...	40	3,825	45	4,083
Grand Total of Marathi, Gujarati and Urdu Schools ...	142	15,861	160	16,746

There was an increase of 18 Schools and 985 Scholars over the totals of the foregoing year. The attendance would have been larger, but for the decline in several schools owing to the prevalence of the plague. Three of the new schools were opened specially for the education of factory children, who are charged no fee and are supplied with slates and pens and Exercise Books. Mill-hands generally are indifferent about the education of their children, but with the co-operation of the Managers, the experiment is likely to meet with success.

Training of Teachers.

Government have made provision for the instruction of a maximum number of seventy-five students from Bombay in the Training Colleges for Men and Women in Poona and Ahmedabad and the supply of trained Teachers will, consequently, be more satisfactory in future. The want is felt most in Urdu Schools, but there is a prospect of these schools having a very fair proportion of qualified teachers within a few years, in consequence of the Government Notification to the effect that Moslem candidates at the Vernacular Final Examination may be examined in Urdu, and of special provision made for Mahomedan students at the Ahmedabad Training College. Besides maintaining a special class for the preparation of Mahomedan students for the Vernacular Final Examination, the Committee have introduced with the same object, the full vernacular course in one of their Urdu schools, and are also awarding a number

of stipends and scholarships for their encouragement. The number of trained and untrained teachers in 1912-1913 was as under :—

	Number of Teachers.								
	Trained.			Untrained.			Total.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
			For the year 1911-1912.						
Marathi	117	26	143	96	36	132	213	62	265
Gujarati	28	18	46	72	32	104	100	50	150
Urdu	15	...	15	112	24	136	127	24	151
Total ...	160	44	204	280	82	362	440	126	566
			For the year 1912-1913.						
Marathi	142	31	173	100	33	133	242	64	306
Gujarati	26	20	46	80	43	123	106	63	169
Urdu	16	...	16	139	27	166	155	27	182
Total ...	184	51	235	319	103	422	503	154	657

School Buildings.

Five schools have been accommodated in special buildings constructed out of the sum of ten lakhs to which the Government and the Municipality have agreed to contribute equally. Negotiations are in progress for the acquisition of sites for more buildings.

As many as eighteen schools occupying hired buildings were removed to better quarters during the year, and additional accommodation was provided for eight more schools.

Aided Schools.

The following table shows the number of Aided Schools with the attendance thereat, as contrasted with the figures for the preceding year :—

Class of Schools.	Aided.			
	1911-1912.		1912-1913.	
	Schools.	Pupils.	Schools.	Pupils.
Marathi.				
Day Schools—				
Primary for boys	38	4,240	41	4,579
Do. for girls	16	1,701	16	1,910
	54	5,941	57	6,489
Night Schools	18	354	18	329
Total of Marathi Schools ...	72	6,295	75	6,818
Gujarati.				
Day Schools—				
Primary for boys	31	3,774	33	3,577
Do. for girls	15	2,320	17	2,418
Night School	1	112	2	101
Total of Gujarati Schools ...	47	6,206	52	6,096
Urdu.				
Day Schools—				
Primary for boys	5	871	5	857
Do. for girls	2	249	2	250
Total of Urdu Schools ...	7	1,120	7	1,107
Grand Total of Marathi, Gujarati and Urdu Schools ...	126	13,621	134	14,021

As will be seen, there was an addition of eight schools and 400 pupils over the totals for the year 1911-1912.

The total amount paid as grant-in-aid was Rs. 45,167 against Rs. 40,647 in 1911-1912. The grant of a number of schools was re-assessed, and an increase was allowed to them in view of their progress and development.

Death of Teachers.

The Committee regret to note that as many as eighteen teachers died in the year under report. Of these six died of consumption and one of plague. The death-roll includes Bai Ruxmanibai Laloobhoy, Head Mistress, Bhuleshwar Girls' School, Mr. B. H. Haldavnekar, Head Master, Currey Road School, and Mr. M. P. Khare, Head Master, Worli School, noted for their long and meritorious service.

Scholarships.

Two of the Mary Carpenter Scholarships were won by the S. S. Bengalee Girls' School, and two were awarded to pupils of the Madanpura Urdu Girls' School.

Donations.

Lady Sydenham was so good as to present one hundred copies of a Gujarati Book, called "Stri Jatino Dharama," for distribution in Girls' Schools.

Mr. N. V. Mandlik, Executor, Rehatsek Estate, sent a cheque for Rs. 400 for distribution as money prizes amongst deserving pupils.

The residuary legatee of a gentleman, named Mr. Parmanand Raja, has agreed to pay a sum of Rs. 11,000 on condition that one of the Municipal Schools is named after Mr. Raja. The terms on which the offer was made have been accepted by the Corporation.

Mr. Abdul Karim Jamal contributed Rs. 36 for the payment of scholarships to Moslem girls. Some minor gifts were also received from other gentlemen.

The Committee have accepted all these donations with cordial thanks.

Race of Pupils.

The number of pupils in the Municipal and Aided Schools, according to their race, was as under:—

Race.	1911-1912.			1912-1913.		
	Municipal.	Aided.	Total.	Municipal.	Aided.	Total.
Europeans and Eurasians	...	...	...	...	1	1
Portuguese and Native Christians	75	317	392	91	362	453
Hindus	11,182	7,600	18,782	11,816	8,079	19,895
Mahomedans	4,229	2,047	6,276	4,510	1,935	6,445
Buddhists	...	...	...	...	...	...
Parsis	297	3,179	3,476	260	3,135	3,395
Others	78	478	556	69	509	578
Total ...	15,861	13,621	29,482	16,746	14,021	30,767

N. B. MASANI,
Secretary, Schools Committee.

Appendix A.

Statement of Actual Income and Expenditure of the "School Fund" for the year 1912-1913.

Receipts.	Amount.	Expenditure.	Amount.
	Rs. a. p.	A.—SCHOOLS.	Rs. a. p.
1. Balance on the 1st of April 1912	73,102 15 8	1. Head Masters and Teachers	1,93,873 1 4
		2. Servants	7,049 1 4
		3. Rent	86,001 14 3
2. Fees from Municipal Schools	29,163 11 0	4. Cost of Class Books	873 5 11
		5. School Furniture	9,656 4 6
		6. Prizes	8,657 10 10
3. Contribution from the General Municipal Fund..	3,37,257 0 0	7. Contingencies and Miscellaneous	14,979 7 4
		8. Scholarships in Schools	429 0 0
		9. Stipends of Students under training as Vernacular Teachers	4,147 0 6
4. Government Grants-in-Aid towards Buildings ...	.....	10. Superintendent's Establishment	9,460 4 1
		11. Grants-in-Aid to Primary Schools	45,167 0 0
5. Interest on Endowments or Investments ...	2,269 3 0	12. Library and Museum	1,266 7 11
6. Miscellaneous	148 0 0	B.—BUILDINGS.	
		1. Municipal Original Works	.....
		2. Repairs to Municipal School Houses	1,587 7 6
		Balance on 31st March 1913	63,852 12 8
Total Rs. ...	4,41,940 13 8	Total Rs. ...	4,41,940 13 8

THE SCHOOLS COMMITTEE'S OFFICE,
BOMBAY, 31*st March* 1913.

N. B. MASANI,
Secretary, Schools Committee.

Appendix B.

Balance Sheet of the "School Fund" for the year 1912-1913.

Liabilities.	Rs. a. p.	Assets.	Rs. a. p.
To Deposit Account	550 1 2	By Bank of Bombay- Government, &c., Paper Deposit Account	4,000 0 0
„ Hurkisondas Brijlal Prize Fund—		„ Bank of Bombay, Surplus Cash, Government, &c.,	
Principal ... ... Rs. 500 0 0		Paper Deposit Account	48,218 12 0
Interest ... ... „ 12 3 7	512 3 7	„ Advance Account—	
„ Dr. Blaney Prize Fund—		To the Secretary ... ... Rs. 15 0 0	
Principal ... ... Rs. 1,000 0 0		„ Superintendent ... „ 50 0 0	
Interest ... ... „ 41 4 8	1,041 4 8		65 0 0
„ Madhavdas Rugnathdas Prize Fund—		„ Advance Miscellaneous	20 0 0
Principal ... ... Rs. 500 0 0			
Interest ... ... „ 9 8 0	509 8 0	„ Bank of Bombay on account of Securities from Contractors	2,100 0 0
„ Jivkore Lallubhai Scholarship, &c., Fund—		„ Actual Cash Balance—	
Principal ... ... Rs. 1,000 0 0		In Bank of Bombay ... Rs. 16,478 3 3	
Interest ... ... „ 176 2 0	1,176 2 0	„ Office Treasury ... ... „ 5 6 0	16,483 9 3
„ Bachoobai S. Bengalee Prize Fund—			
Principal ... ... Rs. 1,000 0 0			
Interest ... ... „ 63 8 2	1,063 8 2		
„ Donations for Urdu Training Teachers	2 0 0		
„ N. S. Bengalee Donation	4 0 0		
„ Abdul Karim Scholarship	12 0 0		
„ Cutchhi Memon Scholarship	28 0 0		
„ Paper Deposits from Contractors—			
Principal ... ... Rs. 2,100 0 0			
Interest ... ... „ 35 13 0			
	2,135 13 0		
„ Income and Expenditure Account—			
Balance on 31st March 1913	63,852 12 8		
Total Rs. ...	70,887 5 3	Total Rs. ...	70,887 5 3

THE SCHOOLS COMMITTEE'S OFFICE,
BOMBAY, 31*st March* 1913.

N. B. MASANI,
Secretary, Schools Committee.

BOMBAY, *15th August* 1913.

From

THE MUNICIPAL AUDITORS,
BOMBAY,

To

THE MUNICIPAL SECRETARY,
BOMBAY.

SIR,

We have the honour to forward herewith our report on the Municipal Accounts for the year 1912-13 with a view to the same being printed and submitted to the Corporation as usual.

We have the honour to be,
Sir,
Your most obedient servants,

BHUKHANDAS B. DESAI,

SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

REPORT OF THE AUDITORS OF MUNICIPAL ACCOUNTS FOR THE YEAR 1912-1913.

For the audit of the accounts under review, Messrs. B. B. Desai and S. T. Thakur were appointed to be Auditors, as per Corporation Resolution No. 6952, dated the 4th March 1912.

2. As usual, all vouchers and papers, relating to both Receipts and Disbursements for the year 1912-13, have been examined with the Day-Books and the Subsidiary Ledgers or Classified Abstracts of Receipts and Charges; the postings in the General Ledger have, also, been checked with the entries in the Day-Books, and those in the Journal with the Subsidiary and General Ledgers.

3. The Weekly Statements of Receipts and Charges of the Municipal Fund were examined, as they were prepared, prior to their publication in the *Bombay Government Gazette*.

4. The number of vouchers, relating to the accounts of the year, under review, compares with those of the previous year as follows :—

	1911-12.	1912-13.
Receipt vouchers	37,325	39,993
Disbursement vouchers	85,514	90,657
	1,22,839	1,30,650
	+7,811	

There is on the whole an increase of 7,811 in the number of vouchers in the year under report.

5. The result of the year, compared with the Budget and the Revised, and the Actuals of the previous year, has been summarized below :—

	Actuals, 1911-12.	1912-13.		
		Budget.	Revised.	Accounts.
	Rs.	Rs.	Rs.	Rs.
Revenue and Receipts	*1,21,36,888	1,20,00,500	1,23,45,500	1,27,41,589
Expenditure	*1,09,65,661	†1,18,89,616	‡1,31,00,589	‡1,16,81,587
Surplus ... ... +	11,71,227	1,10,884	.....	10,60,002
Deficit ... ... —	.....	.....	7,55,089	.....

* Exclusive of Rs. 4,88 901 on account of realizations of interest on Sinking and Reserve Funds, and Rs. 30,000 on account of Premia received on the 1st instalment of the 55 Lakhs Loan.
† Exclusive of Rs. 1,10,053 provided in the Budget for writing-off Plague expenditure, originally advanced from Loan Funds.
‡ Exclusive of Rs. 2,00,000 + Rs. 1,10,053 = Rs. 3,10,053 provided for writing-off Plague expenditure, met out of loan Funds.

6. For the purpose of comparison of the normal figures of Receipts and Expenditure several items of an extraordinary and non-recurring nature have been eliminated from the figures in the above statement as explained by asterisks.

7. The total receipts during the year under review were more than those of the previous year by Rs. 6,04,701. The increase is mainly under Wheel Tax and Tolls, Town duties, Halalkhore and Water Taxes, Market Receipts, Miscellaneous Receipts and Interest on Investments of Surplus and Loan Funds. The Revenue under "General Tax," "Miscellaneous Fees," and "Payment by the City Improvement Trust of credit balance in General Account under Section 79 of Act IV of 1898," was less than in the previous year. The actuals of receipts were better than the Budget and the Revised by Rs. 7,41,089 and Rs. 3,96,089, respectively. The reasons for the variations have been given in the report of the Chief Accountant.

8. The total expenditure from the Municipal Fund during the year under report amounted to Rs. 1,16,81,587 against Rs. 1,09,65,661 in the previous year, resulting in an increase of Rs. 7,15,926. The actuals are better than the Budget and the Revised by

Rs. 2,08,029 and Rs. 14,19,002 respectively. When compared with the actuals of the previous year, there are variations under several heads, which have been explained in the report of the Chief Accountant.

9. The Budget estimated for a surplus of Rs. 1,10,884. This surplus was changed into deficit of Rs. 7,55,089 in the Revised Final Estimate. The actuals have, however, resulted in a surplus of Rs. 10,60,002 against a surplus of Rs. 11,71,227 in the year 1911-12. It may be noted that the above surplus of Rs. 10,60,002 has been reduced by Rs. 3,10,053 utilised in writing off a portion of Plague Expenditure which had been outstanding as an advance from Loan Funds.

10. The opening cash balance on the 1st April 1912 was Rs. 3,70,273-4-0. This together with the total receipts of the year (inclusive of Debt, Deposits, Advances, &c.) amounted to Rs. 6,35,99,698-0-1. The gross payments during the year amounted to Rs. 6,31,47,759-10-6, thus leaving a balance of Rs. 4,51,938-5-7 on the 31st March 1913.

11. The surplus funds investments on the 31st March 1913 amounted to Rs. 37,98,940-2-5 as per following details against Rs. 38,51,073-2-2 on the same date last year.

	Rs.	a.	p.
In Government, &c., paper with the Bank of Bombay (face value Rs. 6,95,400)	6,96,148	2	0
In Current Account with the following Banks :—			
Hongkong and Shanghai Banking Corporation	25,445	13	8
Comptoir National D'Escompte de Paris	137	4	9
Chartered Bank of India, Australia and China	75,540	11	2
National Bank of India, Limited	25,171	11	5
Yokohama Specie Bank, Limited	50,640	15	1
Mercantile Bank of India, Limited...	1,01,113	14	3
Bank of India, Limited	98,088	1	9
Eastern Bank, Limited	1,26,653	8	4
Total ...	5,02,792	0	5
In Fixed Deposits with the following Banks :—			
Comptoir National D'Escompte de Paris	6,00,000	0	0
Bank of Bombay	2,00,000	0	0
Yokonama Specie Bank, Limited	7,00,000	0	0
Bank of India, Limited	2,50,000	0	0
Eastern Bank, Limited	8,50,000	0	0
Total ...	26,00,000	0	0
Grand Total ...	37,98,940	2	5

12. The invested balances of the several Loan Funds on the 31st March 1913 amounted to Rs. 21,80,525-14-10 as per following details against Rs. 36,58,394-1-10 on the same date last year : —

	Rs.	a.	p.
In Government, &c.. Paper with the Bank of Bombay (face value Rs. 8,52,500)	8,23,935	10	0
In Current Account with the following Banks :—			
Hongkong and Shanghai Banking Corporation	286	0	3
Chartered Bank of India, Australia and China	159	1	10
National Bank of India, Limited	134	10	2
Yokohama Specie Bank, Limited	203	3	4
Mercantile Bank of India, Limited	66	5	9
Bank of India, Limited	29,047	2	9
Eastern Bank, Limited	26,693	12	9
Total ...	56,590	4	10
Carried over ...	8,80,525	14	10

	Rs.	a	p.
Brought forward ...	8,80,525	14	10
In Fixed Deposits with the following Banks :—			
Comptoir National D'Escompte de Paris	2,00,000	0	0
Bank of Bombay	10,00,000	0	0
Eastern Bank, Limited	1,00,000	0	0
Total ...	13,00,000	0	0
Grand Total ..	21,80,525	14	10

13. The above balances in the several Banks have been compared with the Pass Books of the various Banks and found correct, and the safety receipts for the Government, &c., Papers, lodged with the Bank of Bombay, and the Fixed Deposit receipts of the several Banks were examined and found to be in order.

14. The following is the list of charges, sanctioned during the year 1912-13 by the Municipal Commissioner and paid out of his Discretional Contingent Grant :—

Item No.	Particulars.	Amount. Rs.	a.	p.
1	Purchase of an "Oliver" Typewriter from the Royal Visit Fund Committee for the use of the Commissioner's Department	275	0	0
2	Cost of a telegram sent to Mr. Midgley Taylor in connection with the duplication of Tansa Main	80	0	0
3	Portion of the cost of constructing a urinal on the south side of the Crescent	64	1	2
4	Survey fee paid to Mr. N. S. Glazebrook for inspecting and estimating the damages done to the cotton bales belonging to Messrs. E. Spinner & Co. at Victoria Bander by the over-flowing of the drain on account of a choke in 9" pipe sewer	25	0	0
5	Cost of a telegram sent to Mr. Midgley Taylor agreeing to pay his fees and other expenses in connection with his visit to Bombay to report on the Duplication of Tansa Main... ...	18	0	0
6	Charges paid to Mr. J. T. McIntyre for visiting Bombay to give evidence before the Sub-Judge of Bhiwandi in Mr. Kurve's case	717	4	0
7	Cost of putting up a stand-pipe at the Haines Road cemetery	222	12	5
8	Purchase of a Vacuum cleaner machine for use in the Municipal Office building	450	8	0
9	Purchase of a "D" solution sprayer with a drum of 4½ gallons of "D" solution from Messrs. Treacher & Co. for the prevention of mosquitoes in the Commissioner's room ...	58	0	0
10	Providing arrangements for stacking stoneware pipes at Central Stores	278	9	1
11	Write-off of an irrecoverable bill for pulling down an unauthorised work done at Dadar Portuguese Church—S. C. Resolution No. 1668 of 12th June 1912	5	0	4
12	Making a wooden partition in the Assistant Drainage Engineer's room and fixing a wooden swing door to the existing partition for providing temporary office accommodation for Mr. G. Midgley Taylor	188	8	8
13	Advertisement charges in connection with the supply of pipes (steel)	10	3	0
14	Do. do. do.	10	5	0
15	Do. do. do.	12	13	6
16	Write-off of an irrecoverable bill for the removal of a weather frame put up at premises Nos. 216-224, Kazi Syed Street—S. C. Resolution No. 4994 of 27th January 1912	1	9	4
17	Payment to Mr. Chapaji Kushaba Kale in full settlement of his claim for damage done to his carriage in consequence of an accident with a Municipal Steam car.—S. C. Resolution No. 5882 of 15th January 1913	50	0	0
18	Payment to Mr. Baldock for expenses incurred by him for repairs to his motor car damaged by a partially displaced cast-iron manhole cover on Ballasis Road.—S. C. Resolution No. 5884 of 15th January 1913	75	0	0
19	Adjustment of 9 irrecoverable private works water works bills for repairs to meters, belonging to private parties.—	21	1	5
20	Payment of Messrs. Clifton & Co.'s bills for photographing Sir Mangaldas's bungalow in six different positions and supplying one copy of each, and photographing the gate of Matunga and supplying one copy of King's Statue	77	0	0
21	Expenses incurred in connection with the lighting and watching of premises No. 515, Old Nagpada Cross Lane, written off.—S. C. Resolution No. 6120, dated 29th January 1913 ...	20	0	0
22	Payment of a claim preferred by the Bombay Electric Supply and Tramways Company, Limited, against the Municipality, in respect of damage caused to their car by a motor refuse wagon of the Health Department—S. C. Resolution No. 6764 of 20th February 1913.	8	2	6
23	Cost of making and supplying 7 Teakwood cupboards and two teakwood stools, required for keeping records of the Commissioner's Office	872	13	2
24	Payment of charges for the removal of surplus earth from DeLisle Road and Currey Road for filling in the low-lying ground between DeLisle Road and Arthur Road	49	3	10
25	Do. do. do. ...	44	8	1
26	Payment of an excess incurred over the sanctioned grant for the work of providing a cab-stand at Queen's Road junction with Church Gate Station	23	7	2
27	Purchase of a Heathman's Patent Treble extension ladder, 32 feet long, for use in the Municipal Office Building	106	0	0
28	Payment to the Bombay Electric Supply and Tramways Company, Limited, on account of remuneration to their inspectors for counting passengers coming into Fort from different wards of the City	50	0	0
29	Compensation to Mr. P. D. Patel for damage done to his building in course of construction at Parel Road by a Municipal Fire Engine...	20	0	0
30	Compensation to Mr. Cassum Abba for damage done by a Municipal Fire Engine to Victoria No. 145	10	0	0
31	Cost of removing surplus earth from the Drainage and Water Works trenches and utilizing the same for filling in the low-lying ground between Arthur Road Hospital and DeLisle Road	99	11	1
32	Do. do. do.	119	11	0
	Total ... Rs.	4,014	4	9

15. The amount outstanding on the 31st March 1913, under " Advances, Personal Account of Municipal Officers," was Rs. 31,113-7-4 against Rs. 46,955-12-5 on the same date last year. The former sum includes Rs. 5,975 on account of Permanent Advances to Municipal Officers and the remainder, *viz.*, Rs. 25,138-7-4 represents the sums debited to this head, pending adjustment.

16. The amounts outstanding on the 31st March 1913, under the heads noted below compare as follows with those on the same date last year :—

	1911-12.	1912-13.
	Rs. a. p.	Rs. a. p.
Departmental Works	6,746 2 3	9,390 8 6
Private Works	21,385 13 2	37,932 9 8
Workshop	11,263 2 1	15,773 6 1
Total ...	Rs. 39,395 1 6	63,096 8 3

17. The amount outstanding on the 31st March 1913 to the debit of " Personal Account of Municipal Contractors " for supplies and services rendered to them, and for recoveries, due from defaulting Contractors, was Rs. 26,426-15-8 against Rs. 515-8-8 on the same date last year. A major portion of this large balance has been recovered during the year 1913-14.

18. The amounts outstanding on the 31st March 1913 under " Miscellaneous Advances " aggregated Rs. 13,48,879-4-9 against Rs. 3,75,433-11-7 on the same date last year. The large increase under this head has been explained in the report of the Chief Accountant.

19. The total expenditure on account of Plague during the year under report, met out of current revenue, amounted to Rs. 1,47,763-0-2 against Rs. 1,55,903 in the preceding year. The total expenditure on this account from the commencement of Plague, *i. e.*, from the year 1896-97 to the end of the year 1912-13, amounted to Rs. 77,22,213 and was financed as follows :—

	Rs.
(1) From the 20 lakhs Plague Loan	20,00,000
(2) From the Government Contribution	14,50,000
(3) From the amount recovered from the City Improvement Trust.	16,00,000
(4) From the Current Revenue	25,72,213
(5) From Advances from Loan Funds	1,00,000
Total ...	Rs. 77,22,213

It may be noted that at the commencement of the year there was a balance of the Plague Expenditure amounting to Rs. 4,10,053 outstanding under Advances from Loan Funds. Of this balance a sum of Rs. 3,10,053 has been adjusted from the Surplus Cash Balance during the year under report leaving a balance of Rs. 1,00,000.

20. The scrutiny of collections and of outstanding Bills of Rates and Taxes for the year 1912-13 and of the previous years :—

Collections—During the year there were issued by the Assessor and Collector 91,020 net demand assessment bills for Property and Wheel Taxes of the value of Rs. 82,22,035-2-8 and 2,902 bills for meter hire for the same year of the value of Rs. 31,029-9-9.

The following figures give the particulars of the bills and collections :—

		Rs. a. p.	Rs. a. p.
90,859	Bills for Property and Wheel Taxes were issued for 1912-13 of the value of ...		82,08,882 1 4
156	Bills for the year 1911-1912	13,555 14 10	
3	" " 1910-1911	58 13 10	
1	" " 1909-1910	24 12 6	
1	" " 1907-1908	13 8 2	
161			13,653 1 4
2,902	Bills for meter hire for 1912-1913	.....	31,029 9 9
93,922			82,53,064 12 5
	Add—Government and Port Trust Contributions as per awards	4,80,147 0 0	
	Outstandings on 31st March 1912	71,112 6 0	
			5,51,259 6 0
	Total amount to be collected ...	.....	88,04,324 2 5
	Carried forward Rs. ...	.....	88,04,324 2 5

	Rs.	a.	p.
Brought forward...	88,04,324	2	5
Levied annually by the Assessor and Collector 82,50,352 13 0			
Paid by Government and Port Trustees 4,80,147 0 0			
	87,30,499	13	0
	73,824	5	5
Deduct—Amount of bills recalled and cancelled for all years from 1907-08 to 1911-12... ...	20,136	12	7
Total outstanding on 31st March 1913	53,687	8	10
Amount outstanding on 31st March 1912 exclusive of meter hire	70,758	1	7
Deduct—Amount of bills recalled and cancelled during the year for all years prior to 1912-13 exclusive of Rs. 385 on account of meter hire	19,751	12	7
	51,006	5	0
Add—Amount of bills amended and issued during the year	13,653	1	4
	64,659	6	4
Deduct—Amount recovered during the year	57,740	11	9
Balance outstanding on 31st March 1913	6,918	10	7

21. In accordance with the instructions contained in the Corporation Resolution No. 5294, dated the 19th November 1888, all Sinking Fund Investments during the year, pertaining to the several Loans, were examined with the result that Rs. 6,24,983 were found to be invested, whereas the amount provided in the Budget for the year 1912-13 was Rs. 6,24,313. The excess investment of Rs. 670 has been met by re-appropriation from other grants under the same major head. The total accumulated balance on account of the several Sinking Funds on the 31st March 1913 amounted to Rs. 1,26,39,883-5-9 (Rs. 1,26,38,569-11-0 in securities of the nominal value of Rs. 1,26,41,500 as given below, and Rs. 1,313-10-9 in Cash):—

	Nominal Value of Paper. Rs.	a.	p.	Actual Cost. Rs.	a.	p.
5 per cent. Municipal Debentures ...	34,66,000	0	0	34,66,000	0	0
4 per cent. do. do. ...	24,16,000	0	0	24,15,816	6	9
4 per cent. Bombay Improvement Trust Bonds	28,64,000	0	0	28,64,051	11	3
3½ per cent. Government Promissory Notes...	34,19,600	0	0	34,16,801	9	0
3 per cent. Government Promissory Notes...	4,75,900	0	0	4,75,900	0	0
Total ... Rs.	1,26,41,500	0	0	1,26,38,569	11	0

The safety receipts granted by the Bank of Bombay for the above securities in its custody have been examined and found to be in order, and the cash balances in the Bank's Pass-Books of the above funds have also been verified and found correct.

22. The balances of the several Reserve Funds, *viz.*, the "Municipal Building Fire Insurance," "Worn out Water Mains Renewal," and the "Net Premia" Funds on the 31st March 1913 amounted to Rs. 9,09,385-4-5 (Rs. 9,08,181-4-0 in securities of the nominal value of Rs. 9,03,000 as given below and Rs. 1,204-0-5 in cash):—

	Nominal Value. Rs.	a.	p.	Actual Cost. Rs.	a.	p.
Municipal Building Fire Insurance Fund...	1,65,000	0	0	1,66,590	10	0
Worn-out Water Mains Renewal Fund ...	5,34,000	0	0	5,36,254	1	0
Net Premia, &c., Fund	2,04,000	0	0	2,05,336	9	0
Total Rs. ...	9,03,000	0	0	9,08,181	4	0

The Bank's safety receipts for the above securities and the Pass-Books for the cash balance have been examined and found to be in order.

23. The safety receipts for securities in Government, &c., Paper, received from the Municipal employés and contractors, and belonging to several memorial funds and lodged with the Bank of Bombay, have been examined and found to be in order.

24. The securities furnished by the Municipal employés and on the record of the Chief Accountant's Office have also been examined with the Registers maintained in his office and found to be in order.

25. The balance of stock in hand on the 31st March 1913, as per books of the Chief Accountant, compared with that of the preceding year, was as follows:—

Department.	1911-1912.	1912-1913.
	Rs. a. p.	Rs. a. p.
Executive Engineer's Department	—979 11 0	2,164 14 0
General Stores Department.		
General Stores	3,07,380 9 6	3,01,553 0 8
Surplus and Obsolete Stores	35,422 14 7	26,868 6 9
Line Suspense Account	1,15,652 8 5	1,16,397 8 9
Total Rs. ...	4,58,456 0 6	4,44,819 0 2
Stores (Sales)	14,495 5 4	15,094 11 4
Water Works Imprest	2,086 0 10	3,283 8 5
Stock Adjustment Account	—146 6 5	—5,839 6 5
Total Rs. ...	16,434 15 9	12,538 13 4
Grand Total Rs. ...	4,73,911 5 3	4,59,522 11 6

26. In accordance with the instructions contained in para. XXIX of the Stores and Stores Audit Manual, a balance sheet of the General Stores Department has been prepared in the form prescribed in Appendix O of the Manual, giving two sets of figures, one from the Books of the Chief Accountant and the other from the Balance Sheet of the Storekeeper. The difference in the balance on the 31st March 1913 between the two sets of figures has been explained by a footnote in the statement hereto attached.

BHUKHANDAS B. DESAI,

SHIWARAM TRIMBAK THAKUR,

Municipal Auditors.

BOMBAY, 15*th August* 1913.

Statement of Stores Transactions for the year ending 31st March 1913.

(Appendix O of the Stores and Stores Audit Manual.)

General Stores Department.	Figures as per Books of the Chief Accountant.					Figures as per Balance Sheet of the Storekeeper.				
	Balance on 31st March 1912.	Receipts during 1912-13.	Total.	Issues during 1912-13.	Balance on 31st March 1913.	Balance on 31st March 1912.	Receipts during 1912-13.	Total.	Issues during 1912-13.	Balance on 31st March 1913.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
General Stores ...	3,07,380 9 6	5,84,960 11 8	8,92,341 5 2	5,90,788 4 6	3,01,553 0 8	2,98,762 14 3	5,95,207 4 5	8,93,970 2 8	6,02,000 4 8	2,91,969 14 0
Surplus and Obsolete Stores	35,422 14 7	139 14 9	35,562 13 4	8,694 6 7	26,868 6 9	34,718 7 7	149 4 9	34,867 12 4	7,999 5 7	26,868 6 9
Line Suspense Account	1,15,652 8 5	2,287 4 4	1,17,939 12 9	1,542 4 0	1,16,397 8 9	1,14,951 6 5	5,715 3 8	1,20,666 10 1	4,334 5 4	1,16,332 4 9
Total Rs. ...	4,58,456 0 6	5,87,387 14 9	10,45,843 15 3	6,01,024 15 1	4,44,819 0 2	4,48,432 12 3	6,01,071 12 10	10,49,504 9 1	6,14,333 15 7	4,35,170 9 6
									Difference ...	* 9,648 6 8
										4,44,819 0 2

* The difference of Rs. 9,648-6-8 between the balances on 31st March 1913, as shown above, is mainly due to non-adjustments of the value of certain stores in the books of the Chief Accountant. These adjustments will be made on receipt of complete information and documents from the different Departments.

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

BOMBAY, 15*th August* 1913.

MUNICIPAL OFFICES,
BOMBAY, *30th May* 1913.

FROM

THE MUNICIPAL AUDITORS,
BOMBAY :

To

THE MUNICIPAL SECRETARY,
BOMBAY.

SIR,

In accordance with Section 137 of the Bombay Municipal Act of 1888, we have the honor to forward herewith the three Appendices, marked A, B and C, containing the result of the scrutiny of the outstanding Bills of Rates and Taxes, which were in the hands of Ward Clerks and in the Office of the Assessor and Collector on the 31st March 1913.

2. These Appendices form part of the Annual Report on the Municipal Accounts for the year 1912-13, now under preparation.

We have the honor to be,
Sir,
Your most obedient Servants,

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

Appendix A.

STATEMENT OF OUTSTANDING BILLS OF RATES AND TAXES in the hands of the Ward Clerks and in the Office of the Assessor and Collector on the 31st March 1913.

Wards.	No. of Bills.	Amount.								Grand Total.
		On Value.				Compounded or Special.			Tax on Vehicles and Animals.	Meter Hire.	
		General Tax.	Water Tax.	Halalkhor Tax.	Total.	Compound Water Service.	Special Halalkhor Service.	Water Charged by Meter.			
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A. ...	140	3,438 10 2	919 9 2	1,058 15 2	5,417 2 5	0 8 0	.....	982 11 1	595 10 7	26 0 0	7,022 0 1
A.—Government, Port Trust and Railways.	101	1,375 6 1	462 9 2	73 14 6	1,911 13 9	50 1 5	553 13 10	20,034 5 3	91 0 0	141 4 5	22,782 6 8
A.—City Improvement Trust.	23	375 11 6	119 5 5	106 12 0	601 12 11	.....	.....	75 14 2	.....	.....	677 11 1
B ...	85	2,392 0 6	736 3 5	674 3 8	3,802 7 7	.....	.....	253 6 0	68 0 0	3 0 0	4,126 13 7
C ...	49	2,152 0 4	697 8 6	597 4 1	3,446 12 11	.....	25 8 10	25 10 0	123 0 0	.....	3,620 15 9
D ...	57	1,689 4 2	529 15 4	578 10 6	2,797 14 0	.....	.....	168 15 0	274 0 0	.....	3,240 13 0
E ...	68	1,142 3 8	322 14 10	410 13 0	1,875 15 6	2 8 0	.....	841 0 3	321 0 0	.....	3,040 7 9
F ...	51	403 0 1	55 0 8	126 2 2	584 2 11	1 0 0	.....	103 5 0	121 0 0	.....	809 7 11
G ...	64	509 8 9	455 13 0	442 11 1	1,406 0 10	.....	.....	37 1 7	5 0 0	.....	1,448 2 5
Total ...	583	13,477 13 2	4,296 15 6	4,069 6 2	21,844 2 10	54 1 5	579 6 8	22,522 4 4	1,598 10 7	170 4 5	46,768 14 8

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

MUNICIPAL OFFICES,
BOMBAY, 30*th May* 1913.

Appendix B.

STATEMENT OF OUTSTANDING BILLS OF RATES AND TAXES in arrears for the year 1911-12 and previous years in the hands of the Ward Clerks and in the Office of the Assessor and Collector on the 31st March 1913.

Wards.	No. of Bills.	Amount.								
		On Value.				Compounded or Special.			Tax on Vehicles and Animals.	Grand Total.
		General Tax.	Water Tax.	Halalkhor Tax.	Total.	Compound Water Service.	Special Halalkhor Service.	Water Charged by Meter.		
		FOR THE YEAR 1911-12.								
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
A	28	1,051 9 9	257 0 1	295 12 10	1,604 6 8	.....	.....	37 7 0	122 0 0	1,763 13 8
A—Government, Port Trust and Railways.	2	13 13 10	.....	.....	13 13 10	.....	.....	37 12 6	.....	51 10 4
B	13	253 12 10	42 1 9	70 1 11	366 0 6	.....	.....	89 8 0	37 0 0	492 8 6
C	2	106 12 6	33 14 8	30 2 5	170 13 7	.....	.....	.....	11 0 0	181 13 7
D	10	475 7 6	37 4 8	154 2 2	666 14 4	.....	.....	1,061 6 6	...	1,728 4 10
E	4	0 11 3	4 6 2	3 14 5	8 15 10	.....	.....	.....	45 0 0	53 15 10
F	2	34 12 9	1 4 3	10 3 2	46 4 2	.....	.....	.....	.....	46 4 2
G	2	6 14 6	2 3 2	.....	9 1 8	.....	.....	.....	.....	9 1 8
Carried over ...	63	1,943 14 11	378 2 9	564 4 11	2,886 6 7	.....	.....	1,226 2 0	215 0 0	4,327 8 7

Appendix B—*contd.*

Wards.	No. of Bills.	Amount. On Value. General Tax.	Water Tax.	Halalkhor Tax.	Total.	Compounded or Special. Compound Water Service.	Special Halalkhor Service.	Water Charged by Meter.	Tax on Vehicles and Animals.	Grand Total.
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ...	63	1,948 14 11	378 2 9	564 4 11	2,886 6 7	.....	.....	1,226 2 0	215 0 0	4,327 8 7
				FOR THE YEAR 1910-11.						
A	9	1,172 3 3	369 15 9	.....	1,542 3 0	.....	766 8 0	.....	22 0 0	2,330 11 0
B	3	76 12 3	23 3 3	20 10 0	120 9 6	.....	.....	.....	.....	120 9 6
D	1	22 13 6	7 4 1	6 7 2	36 8 9	.....	.....	.....	.....	36 8 9
E	1	.....	.....	.....	.....	.....	.....	.....	30 0 0	30 0 0
Total ...	14	1,271 13 0	400 7 1	27 1 2	1,699 5 3	.....	766 8 0	.....	52 0 0	2,517 13 3
				FOR THE YEAR 1909-10.						
A	1	3 5 2	.....	.....	3 5 2	.....	.....	.....	.....	3 5 2
B	2	.....	.....	.....	.....	.....	.....	.....	29 6 0	29 6 0
E	2	.....	.....	.....	.....	.....	.....	.....	18 2 11	18 2 11
Total ...	5	3 5 2	.....	.....	3 5 2	.....	.....	.....	47 8 11	50 14 1
				FOR THE YEAR 1908-09.						
A	2	.....	.....	.....	.....	.....	.....	.....	12 12 8	12 12 8
				FOR THE YEAR 1907-08.						
B	1	.....	.....	.....	.....	.....	.....	.....	9 10 0	9 10 0
Grand Total ...	85	3,219 1 1	778 9 10	591 6 1	4,589 1 0	.....	766 8 0	1,226 2 0	336 15 7	6,918 10 7

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

MUNICIPAL OFFICES,
BOMBAY, 30*th May* 1913.

Appendix C.

SUMMARY OF APPENDICES **A** AND **B.**

Years.	Appendix A. No. of Bills.	Appendix A. Amount.	Appendix B. No. of Bills.	Appendix B. Amount.	Grand Total. No. of Bills.	Grand Total. Amount.
		Rs. a. p.		Rs. a. p.		Rs. a. p.
1912-1913	583	46,768 14 3	.....	.....	583	46,768 14 3
1911-1912	.....	.....	63	4,327 8 7	65	4,327 8 7
1910-1911	.....	.....	14	2,517 13 3	14	2,517 13 3
1909-1910	.....	.....	5	50 14 1	5	50 14 1
1908-1909	.....	.....	2	12 12 8	2	12 12 8
1907-1908	.....	.....	1	9 10 0	1	9 10 0
Total ...	583	46,768 14 3	85	6,918 10 7	668	53,687 8 10

Outstanding amount on the same date last year was Rs. 71,112-6-0.

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

MUNICIPAL OFFICES,
BOMBAY, 30*th May* 1913.

BOMBAY, 29*th July* 1913.

FROM

THE MUNICIPAL AUDITORS,
BOMBAY.

To

THE MUNICIPAL SECRETARY,
BOMBAY.

SIR,

WE have the honour to forward herewith our Report on the Accounts of the Schools Committee for the year 1912-13.

We have the honour to be,
Sir,
Your most obedient servants,
BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

REPORT ON THE ACCOUNTS OF THE SCHOOL FUND FOR THE YEAR 1912-13.

In accordance with Bye-law No. 15 of the Schools Committee, we beg to report that we have audited the accounts, examined all vouchers, relating to the Receipts and Disbursements of the School Fund in charge of the Schools Committee from the 1st April 1912 to the 31st March 1913, and found them in order.

2. The total receipts of the School Fund during the year, under report, amounted to Rs. 3,68,837-14-0 against Rs. 3,65,197-1-5 during the year 1911-12. The excess of Rs. 3,640-12-7, in receipts over the preceding year, is mainly due to increase in the collection of fees from schools, and to interest realized on the investment of Surplus Cash Balance.

3. The total expenditure during the year 1912-13 amounted to Rs. 3,78,088-1-0 against Rs. 3,38,263-8-9 in the year 1911-12. Thus there has been an increase of Rs. 39,824-8-3 in the expenditure over that of the previous year. The causes for the increased expenditure have been explained by the Secretary, in his report on the administration of the Schools Committee for the year under report.

4. It will be seen from the foregoing paras. 2 and 3 that the total outgoings were greater than the total receipts by Rs. 9,250-3-0 during the year under report. The deficit was made good from the Surplus Cash Balance brought forward from the previous year.

5. Under certain heads more Expenditure was booked than the Budget grants. The excesses have, however, been sanctioned to be met from Savings under other heads, *vide* the Schools Committee's Resolution No. 67 of the 11th June 1913.

6. The total Assets and workable balance of the School Fund on the 31st March 1913, amounted to Rs. 70,887-5-3 and Rs. 63,852-12-8, respectively, as per details given below :—

Advances recoverable		Rs.	85 0 0
Government Promissory Notes deposited by Contractors and kept for safe custody in the Bank of Bombay		„	2,100 0 0
Government Promissory Notes and other Securities belonging to Prize Funds, deposited for safe custody with the Bank of Bombay (nominal value)		„	4,000 0 0
Government Promissory Notes of the nominal value of Rs. 50,900, deposited for safe custody with the Bank of Bombay on account of investment of Surplus Cash Balance (actual value).		„	48,218 12 0
Cash Balance—			
In Bank of Bombay	Rs. 16,478 3 3		
In Office Treasury	„ 5 6 0		
		„	16,483 9 3
Total Amount of Assets ...		Rs.	70,887 5 3
Deduct—			
Total Liabilities of the School Fund :—			
On account of Prize Funds, &c. ...	Rs. 4,348 10 5		
On account of Deposit Accounts ...	„ 2,685 14 2		
		„	7,034 8 7
Total amount of workable balance of the School Fund on 31st March 1913		Rs.	63,852 12 8

7. The balance in the Pass-Book of the Bank of Bombay was verified by us and found correct, and the safety receipts for the Government Papers, etc., lodged with the Bank of Bombay, were examined by us and found to be in order.

BHUKHANDAS B. DESAI,
SHIWARAM TRIMBAK THAKUR,
Municipal Auditors.

BOMBAY, *29th July* 1913.

PART II.

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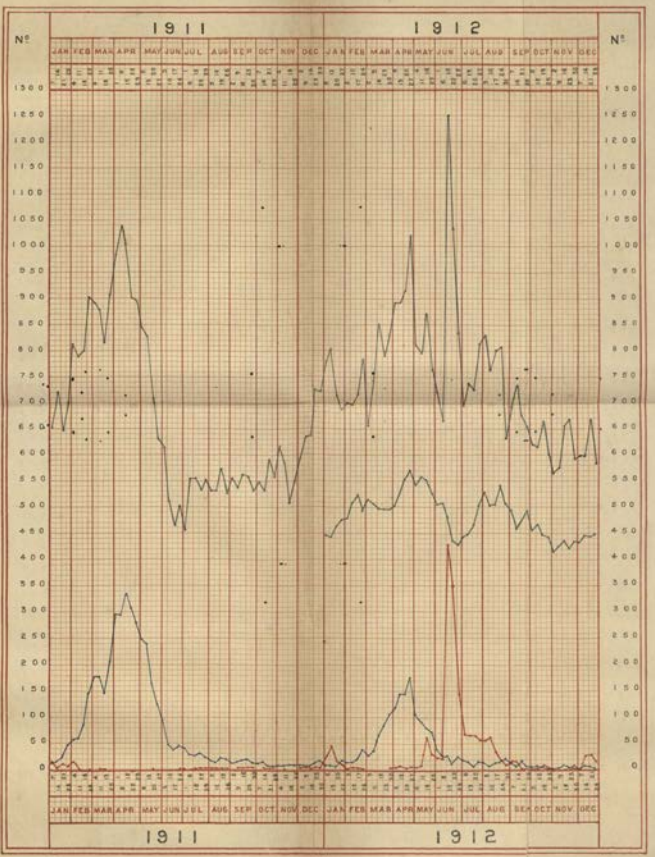
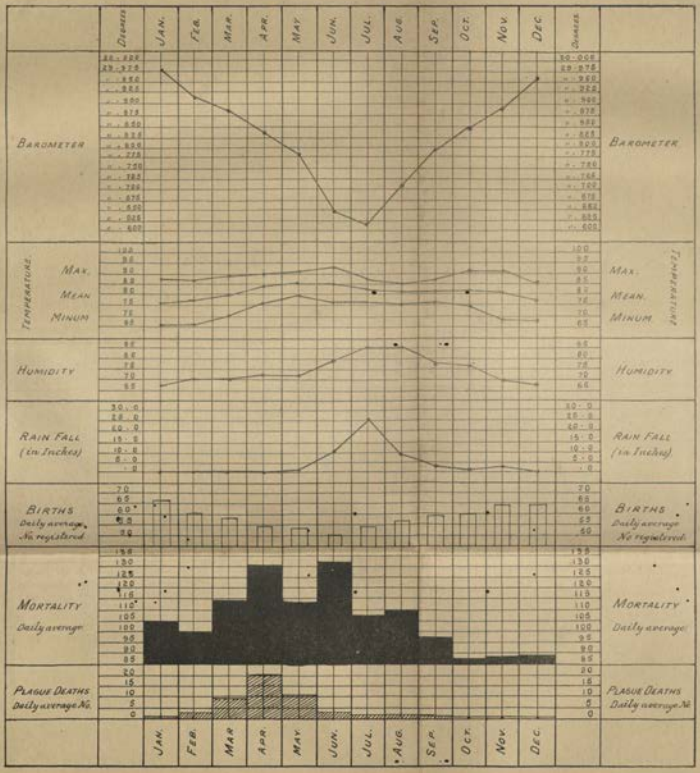
DIAGRAM

WEEKLY TOTAL MORTALITY AND MORTALITY FROM PLAGUE & CHOLERA IN 1911 AND 1912.



DIAGRAM

Daily mean Births, Deaths and Climatic Conditions in Bombay during the several months of 1912.



PUBLIC HEALTH.

Annual Report of the Executive Health Officer for 1912.

I have the honour to submit my Annual Report for 1912 on the Conditions and Administration of the Public Health of Bombay.

Area and Population.

The area of the City and Island is 22·55 square miles; and the population by the Census of 1911—979,445, on which figure has been based the calculation of birth and death-rates in this Report.

Review of Health conditions of 1912 and comparison with those of 1911.

The general health conditions of the City, during the year under report, cannot be said to have been satisfactory: the climatic conditions were unfavourable. The total death-rate was 39·77—the highest recorded since 1907. This would at first appear to be rather remarkable in view of the fact that steady improvement in the death-rate had been recorded during the previous seven years; so that the death-rate for the immediately preceding year (1911—35·69) was, except for that for 1909 (35·66) which was almost the same, the lowest registered since the appearance of Plague in the City (1896).

The year under report was, however, marked not only by the epidemic incidence of Small-pox and Cholera, in addition to that of Plague; but also by enhanced mortality (as compared with that of 1911) recorded under several other causes. Among the few relieving features were the unprecedentedly low mortality from Plague and the considerably lower mortality from Measles; and the registration of a larger number of births than ever before.

Small-pox was epidemic from the last week of February to the end of May and registered 979 deaths, being 536 more than in 1911. Of these 511, or over 52 per cent., were among children under 5 years, accounting for over 59 per cent. of the increased mortality among them.

Cholera was epidemic in the week ended 13th January and in the 3rd and 4th weeks of May and again from the week ending 15th June to that ending 24th August and registered 1,790 deaths, being 1,667 more than in the preceding year.

Plague was epidemic from week ended 24th February to the close of May and recorded 1,717 deaths, being 2,289 less than in 1911; the epidemic of 1912 was thus the mildest in the experience of the City.

The total mortality during the year was 38,954, marking an increase of 3,993 over that of 1911 (34,961); corresponding to the rate of 39·77 per 1,000 of population—the highest since 1907, against 35·69 in 1911.

Of the increase of 3,993 deaths, 2,129 (or 53·3 per cent.) were among children under 5 years.

This increase was the result of increases under several heads: the most considerable being that under Cholera (+ 1,667) which is responsible for 41·7 per cent. of the whole. The next is under Diarrhœal Diseases (+ 1,469). Of the total of 4,544 deaths from this cause, 2,033 or 44·7 per cent. were among children under 5 years and account for 36·7 per cent. of the total increase. The enhancement under Respiratory Diseases (+ 1,046) is next in magnitude and is 26·2 per cent. of the total increase. Of the total number of 9,686 deaths from this cause, 4,412 or 45·5 per cent. were among children under 5 years. Other increases were of 536 under Small-pox (over 52 per cent. of the mortality from which cause has been noted above as having occurred among children under 5 years); 439 under Fevers; 301 under Old Age. Under Debility there was an increase of 225 deaths, of which 97·7 per cent. (equal to 220 deaths) was registered among children under 5 years of age. Of the increase of 230 deaths under the Diseases of the Nervous System 66 per cent. (or 152 deaths) was among children in the same age-group as above. Deaths due to Old Age show an increase of 301 during the year. Tubercle of Lungs and other Tubercular Diseases caused 100 more deaths than in 1911 and Other General Diseases 272 more.

The progressive improvement in the Registration of Births recorded in previous Reports was well maintained during the year; for the number of *live* births registered (21,518) was again the highest: it was 142 more than in 1911 and corresponded to the birth-rate of 21·96 per 1,000 of population against 21·82 in that year.

Rain-fall.

The total rain-fall recorded at the Colaba Government Observatory, during 1912, was 54·05 inches, against 46·51 in 1911 and 67·86 in 1910; and was much below the average (71·15). Rain fell on 87 days during the year, against 92 in 1911 and 104 in 1910: on 1 day in May, 15 in June, 29 in July and August, 7 in September, 4 in October and 2 in November. The maximum monthly rain-fall was 25·77 in July, against 30 inches in the August of 1911.

MONTHS.	1907			1908			1909			1910			1911			1912		
	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.	Maximum.	Mean.	Minimum.
January ..	86·3	76·9	67·2	84·8	75·6	63·4	79·6	73·0	63·7	85·1	74·7	61·4	88·4	75·5	63·1	88·5	76·9	66·4
February ..	84·8	76·4	64·2	89·4	75·4	62·3	88·0	74·8	66·1	85·4	77·0	66·8	90·2	75·6	59·2	88·0	77·3	66·7
March ..	88·4	79·8	71·4	86·4	77·6	65·4	87·2	79·8	71·0	90·4	79·7	68·7	85·6	78·7	70·4	89·2	79·9	70·8
April ..	88·9	83·4	76·7	94·3	83·8	75·9	90·1	82·2	73·9	88·6	82·9	75·5	88·6	81·2	73·4	90·7	84·5	76·2
May ..	90·6	85·1	77·4	90·4	85·1	79·2	91·2	86·2	80·4	90·2	84·9	77·8	91·3	85·6	78·4	91·9	86·5	79·4
June ..	91·0	84·3	77·1	91·4	84·6	77·4	91·4	83·3	76·0	92·6	83·1	76·2	90·4	83·7	77·4	93·4	85·4	76·8
July ..	87·9	81·7	75·3	84·8	80·9	75·9	85·6	80·2	75·6	87·4	82·4	77·3	88·0	82·1	75·8	87·4	82·1	76·9
August ..	84·4	80·1	75·3	83·2	79·9	76·3	85·4	80·3	75·8	85·2	80·3	75·6	84·6	80·3	74·8	85·3	81·0	75·5
September ..	85·4	81·3	75·4	87·8	81·1	76·1	84·4	79·5	74·1	84·8	79·8	74·4	85·5	81·4	77·0	87·3	81·8	76·4
October ..	91·4	82·6	74·9	89·9	82·0	79·2	88·2	80·6	73·0	89·2	81·0	73·2	90·2	82·9	74·4	91·3	82·6	74·2
November ..	92·2	81·9	73·3	86·4	78·6	69·4	88·1	79·5	69·4	87·4	78·2	67·8	90·8	81·3	74·2	91·6	80·3	68·8
December ..	88·4	77·8	67·6	86·2	76·2	65·4	85·8	76·1	67·1	87·0	75·8	63·8	89·2	80·2	70·6	85·9	77·6	68·4

Comparison with the preceding decennium (1902-1911)

In the sub-joined Table the Birth and Death Returns of the City during 1912 are compared with those of the preceding ten years to determine, so far as figures can help to do so, what improvement is discernible in the year under Report.

TABLE OF BIRTHS AND DEATHS REGISTERED FROM PRINCIPAL CAUSES DURING 1902-1912.

Year.	Births.	Small-pox.	Measles.	Plague.	Fevers.	Cholera.	Diarrhœa and Dysentery.	Tubercle of Lungs and other Tubercular Diseases (including Phthisis.)	Diseases of the Respiratory System.	All Causes.
1902...	17,599	288	642	13,820	5,169	75	3,643	4,595	7,250	48,414
1903...	16,375	1,477	1,115	20,788	2,500	17	2,760	3,468	7,101	50,513
1904...	19,556	568	229	13,538	3,530	219	2,784	3,548	7,839	42,676
1905...	19,141	2,161	620	14,198	2,878	26	3,391	3,183	9,103	47,762
1906...	20,769	276	936	10,823	4,882	1,241	4,778	4,052	11,731	52,874
1907...	19,535	86	107	6,389	3,633	439	3,489	3,440	9,022	38,687
1908...	20,166	1,026	653	5,861	3,403	95	3,184	3,023	8,954	38,271
1909...	19,839	473	75	5,197	2,800	727	2,585	2,862	7,974	34,878
1910...	19,939	1,008	184	3,656	3,113	107	3,352	2,839	8,212	34,933
1911...	21,376	443	652	4,006	3,146	123	3,075	2,694	8,640	34,961
Average (1902-1911)	19,429	780	531	9,777	3,405	306	3,304	3,370	8,532	42,396
1912...	21,518	979	210	1,717	3,585	1,790	4,544	2,794	9,686	38,954
Comparison with 1911.	+ 142	+ 536	— 442	— 2,289	+ 439	+ 1,667	+ 1,469	+ 100	+ 1,046	+ 3,993
Comparison with Average (1902-1911)	+ 2,089	+ 199	— 311	— 8,060	+ 180	+ 1,484	+ 1,240	— 576	+ 1,154	— 3,442

It will be found from the preceding Table that, compared with the average of the preceding ten years, the births registered during 1912 (21,518) show an increase of 2,089—the improvement in registration being uninterrupted since 1909.

The mortality from Plague steadily declined since 1905 with a slight interruption in 1911 and was the lowest in 1912 (1,717), being 8,060 less than the decennial average.

The number of deaths registered from Tuberculosis (2,794) was the lowest, except in 1911, when it was 100 less; it was 576 below the decennial mean. The mortality from Measles (210) was higher than in 1907, 1909 and 1910, but much less than in other years, and 311 below the average of the preceding decennium.

On the other hand, the mortality from Cholera (1,790) was the highest since 1901; so also that from Diarrhœal Diseases (4,544) and the Diseases of the Respiratory System (9,686), with the exception of that in 1906; and exceeded the average of the preceding ten years by 1,484, 1,240 and 1,154, respectively.

The mortality from Small-pox exceeded the decennial average by 199; that from Fevers by 178.

The mortality from all causes (38,954) was the highest since 1907, but 3,442 below the decennial mean.

Births and Birth-rate.

The following Table gives the number of births registered in the City and the Birth-rates per 1,000 of population during 1901-1912.

TABLE OF BIRTHS and BIRTH-RATES DURING 1901-1912.

Year.	Population.	No. of Births registered.	Birth-rate per 1,000 of Population.
1901	7,76,006	18,520	17·42
1902		17,599	22·67
1903		16,375	21·10
1904		19,556	25·20
1905		19,141	24·66
1906	9,77,822	20,769	21·24
1907		19,535	19·97
1908		20,166	20·62
1909		19,889	20·28
1910		19,939	20·39
1911	9,79,445	21,376	21·82
1912		**21,518**	**21·96**

The number of births registered during the year, excluding 1,668 Still-births, was 21,518. It exceeded the figure for 1911 (21,376), which approaches it nearest, by 142, and the average of the preceding ten years by 2,089.

Since 1909 the number of births registered has been successively increasing up to its present point which is the highest yet recorded.

The birth-rate per 1,000 of population works out to 21·96 against 21·82 in 1911.

Though the number of births registered in 1912 was the highest on record, the corresponding birth-rate was not: it is, however, the highest since 1906.

In earlier years we find higher rates registered for the period between 1902 and 1905; 22·67 in 1902, 25·20 in 1904 and 24·66 in 1905. But it is not unlikely that these figures, based on the results of the Census of 1901, were fallacious; for, admittedly, that Census was "taken at a very unfavourable time", "when Plague was raging with great virulence and in consequence a large exodus of the population of the City had taken place". The results then obtained were consequently held not to represent the real state of the population during normal times and a fresh enumeration was made in 1906, which disclosed an increase of 2,01,816 over the population figure of 1901. If, therefore, the population for the quinquennium 1901-1905 be taken roughly at the figure established by the Census of 1906, the birth-rate for 1912 would emerge the highest in the history of the City.

It will be seen from the above Table that the birth-rate has risen during the twelve years from 17·42 to 21·96, the rise being progressive since 1909.

This improvement in the Registration of Births is a satisfactory feature of the year and will stimulate the efforts of this Department to further accelerate it. The system of Registration is, however, still far from being perfect and must continue to improve with the co-operation of the general population which is still very meagre: as can be seen from the fact that the number of births reported to the Department by parents or relatives of their own accord is but a small fraction of the total number registered. But this co-operation is rather slow in coming, owing to reasons set out in my previous Reports: ignorance and indifference of the people in general and habits and modes of thought which do not favour notification, the reasons for registration being beyond popular comprehension.

Of the total number of births registered (21,518), 11,073 were male and 10,445 female; the male births were therefore to the female births in the proportion of 1,060 to 1,000; the respective birth-rates per 1,000 of sex population being 17·29 and 30·79 against 16·99 and 30·94 in 1911.

The birth-rate stated in terms of total population (crude birth-rate) must, however, obviously vary with the proportion of females of conceptive ages in the population and with the age constitution of the married female population. Hence the comparison of birth-rates should be based not only on the total number of population but also on the number of possible mothers.

These variations as revealed by the Census of 1911 are shown in the following Statement.

CENSUS YEAR.	Proportion per cent. of women aged 15-45 years in the total population of both sexes and all ages.	Proportion per cent. of married women in female population aged 15-45 years.	Of the married women aged 15—45 years, the proportion per cent. of four groups of ages,				Persons married to 1,000 marriageable persons in the population.	Birth-rate calculated		
			Aged 15—20 years.	Aged 20—25 years.	Aged 25—35 years.	Aged 35—45 years.		On the number of Births registered in	Per 1,000 of total population at all ages.	Per 1,000 of female Population aged 15—45 years.
1901	22·05	77·08	18·55	25·40	39·35	16·49	714·34	1901	17·42	79·00
1906	22·61	77·04	17·62	27·69	39·89	14·77	738·45	1906	21·24	93·93
1911	21·28	76·75	18·25	27·30	39·69	14·75	716·75	1912	21·95	103·19

It will be seen from a scrutiny of the Statement that the enumeration of 1911 discloses a decrease of 1·33 in the proportion of women of conceptive ages (15-45 years) in the population: that is a decrease of 12,585 females. As the figures for years in which censuses are taken are more accurate than those for intercensal years, we may make a comparison of the results of birth registration in 1912 with such results in 1906.

In 1906, 20,769 births were registered and the birth-rate calculated per 1,000 of female population of conceptive ages by the Census of the year was 93·93. With the decrease disclosed in such population by the Census of 1911, the number of births registered in 1912 should have been 19,586. But the number actually registered (21,518) was 1,932 more and the birth-rate (103·19) 9·26 higher; this increase may be taken as representing the measure in which the Registration of Births improved during the period.

Besides the factors which influence in common the birth-rate of every community, there are some peculiar to this City:—(1) the fairly well-established custom of sending prospective mothers home to their parents, where the baby has a better chance of life—so that we have in the City a number of children of mothers belonging to the City but born outside it and therefore not registered; (2) the omission of parents or relatives to register births, through ignorance or neglect—so that we have a considerable number of children who have escaped registration.

During 1912, 6,577 of such children under 1 year of age were primarily vaccinated in Bombay; but a large number must have escaped vaccination either by death or postponement. It will be observed from Table 22, appended to the Report, that 78·27 per cent. of the births registered were vaccinated during the year; it may therefore be assumed that 78·27 per cent. of the unregistered children also were vaccinated, the balance of 21·73 per cent. having escaped vaccination either by death or postponement.

Thus the infant population in the City during the year under report works out as follows :—

Number of Births registered	21,518
Number of Births unregistered (of children primarily vaccinated in Bombay)	6,577
Number of Births unregistered and which escaped vaccination (being 21·73 per cent.)	1,825
Total Number of Births ...	29,920

giving the birth-rate of 30·44 per 1,000 of population compared with 38·58, the birth-rate for the whole of India.

Prosecutions for omission to report births.

During the year action was taken, under Section 446 (1) of the City of Bombay Municipal Act, in three cases for failure to notify the occurrence of births to this Department ; the result was an infliction of fine by the Magistrate of Rs. 3 and 1 in two cases and acquittal in the third.

Births by Months.

MONTHS.	No. of births registered in 1912.	No. of Births registered in 1911.	No. of Births registered in 1910.
January	2,071	1,811	1,701
February	1,793	1,572	1,530
March	1,811	1,717	1,496
April	1,643	1,538	1,515
May	1,669	1,509	1,475
June	1,552	1,592	1,552
July	1,684	1,732	1,630
August	1,754	1,785	1,691
September	1,746	1,935	1,685
October	1,864	2,051	1,870
November	1,931	2,089	1,875
December	2,000	2,045	1,919
TOTAL ...	21,518	21,376	19,939

As usual, the highest number of births was registered in the fourth quarter of the year (5,795 against 6,185 in 1911) and the lowest in the second quarter (4,864 against 4,639 in 1911).

The highest number of births registered in a single month was 2,071 in January against 2,089 in November in 1911, and the lowest 1,552 in June against 1,509 in May 1911.

Compared with 1911, the number of births registered during the first five months of the year was higher, month for month, with an excess of 840 for the period ; but during the rest of the year, the results were exactly the reverse and the accumulated increase of 840 was reduced in successive months, so that only 142 more births were found at the end of December to the credit of the year under review.

TABLE OF BIRTH-RATES FOR THE DIFFERENT RACES OF THE CITY FOR 1911 AND 1912.

	RACE OR CASTE.	Population by the Census of 1911.	Birth-rate for 1911.	Birth-rate for 1912.
Hindus.	Jains	20,460	16·71	13·58
	Brahmins	53,656	7·88	10·10
	Lingaits	1,179	54·28	34·77
	Bhatias	7,780	20·56	16·70
	Hindus of other Castes	547,192	18·44	18·58
	Hindus, Low Caste	54,235	53·38	60·95
Mussalmans (including Negro-Africans)		179,346	24·03	23·17
Parsees		50,931	29·19	26·56
Jews		6,597	31·68	34·10
Native Christians		41,273	25·70	24·05
Eurasians		4,188	22·20	20·29
Europeans		11,894	19·42	19·00
Buddhists		578	13·84	1·73
Other and Unknown Castes		136	95·98	102·94
Total		979,445	21·82	21·96

Birth-rate by Races.

The Birth-rate registered for the entire population was 21·96 against 21·82 in 1911 and was highest since 1906.

Among the different races inhabiting the City, only Hindus and Jews exhibited an improvement in the birth-rate during the year, 21·13 being registered among the former and 34·10 among the latter, against 20·39 and 31·68 respectively in 1911. All the other races registered a decline. The Buddhist rate was 13·84 in 1911, but dwindled down to 1·73 in 1912, as only one birth was registered in the community (which consists of only 578 individuals) during the year, against 8 in 1911. The European birth-rate dropped from 19·42 to 19 and the Eurasian from 22·20 to 20·29. Mussalmans recorded the rate of 23·17, Parsees of 26·56 and Native Christians 24·05 against 24·03, 29·19 and 25·70 respectively in 1911.

Birth-rate by Sections.

The highest rate recorded was 60·95 per 1,000 of *caste population* among Hindus, low caste, against 54·28 among Lingaits in 1911. The lowest birth-rate among Hindus was registered, as in previous years, by Brahmins, 10·10; but this was higher than in 1911 (7·88).

TABLE OF BIRTH-RATES FOR THE DIFFERENT SECTIONS IN THE CITY FOR 1911 & 1912.

Ward.	Sections.	Population by the Census of 1911.	Birth-rate for 1911.	Birth-rate for 1912.
A	Upper Colaba	1,557	50·73	62·94
	Middle and Lower Colaba	19,679	14·73	14·02
	Fort, Southern	3,462	6·06	6·93
	Fort, Northern	25,400	19·92	19·05
	Esplanade	17,761	11·20	11·26
B	Mandvi	33,202	13·85	14·66
	Chukla	24,231	23·11	22·69
	Umarkhadi	45,679	27·08	26·37
	Dongri	27,246	23·34	22·71
C	Market	30,172	12·99	10·60
	Dhobi Talao	38,684	21·79	21·61
	Fanaswadi	27,403	17·77	19·12
	Bhuleshwar	36,459	17·36	16·89
	Khara Talao	22,979	21·54	21·10
	Kumbharwada	27,703	21·33	21·73
D	Khetwadi	31,937	23·82	21·26
	Girgaum	30,779	21·89	20·20
	Chaupati	11,397	18·60	19·04
	Walkeshwar	10,640	21·42	20·36
	Mahalakshmi	26,302	20·72	21·97
E	Mazagon	30,075	24·83	27·56
	Tarwadi	28,424	31·31	33·42
	Second Nagpada	21,700	25·29	26·12
	Kamathipura	36,751	22·72	24·38
	Tardeo	27,758	24·02	26·26
	Byculla	75,348	35·10	32·15
	First Nagpada	6,414	18·70	19·80
F	Parel	45,474	24·21	25·83
	Sewri	19,067	22·23	24·38
	Sion	30,680	27·05	28·61
G	Mahim	30,492	29·67	32·07
	Worli	89,611	21·03	20·71
	Harbour and Docks, Railways and Homeless	44,979	.....	.....
	Total	979,445	21·82	21·96

The birth-rate registered for the whole City was 21·96 for 1912; and the Sections which recorded a higher rate were (1) Upper Colaba (62·94), Chukla (22·69), Umerkhadi (26·37), Dongri (22·71), Mahalaxmi (21·97), Mazagaon (27·56), Tarwadi (33·42), 2nd Nagpada (26·12), Kamathipura (24·38), Tardeo (26·26), Byculla (32·15), Parel (25·83), Sewri (24·38), Sion (28·61), and Mahim (32·07).

The highest birth-rate was registered, as in 1911, in Upper Colaba (62·94), much higher than in 1911 (50·73). Tarwadi comes next with 33·42. The lowest birth-rate was registered, as in previous years, in Fort, Southern (6·93), which is, however, higher than in 1911 (6·06): the reason being that it is purely a business locality and not residential. The next lowest rate was 10·60, for the Market Section, which is, however, considerably lower than in 1911 (12·99).

Total Mortality and Death-rate.

The climatic and health conditions of the year under report were unfavourable and similar to those of 1906. Both years were characterized by the prevalence of abnormal climatic conditions very prejudicial to health. Both were years of very deficient rainfall and succeeded one (two in case of 1906) whose record of rain was very much more meagre. The result in either case was unusually high temperature during Summer and Autumn and unusual rise in the incidence of diseases peculiar to those seasons. The general death-rate recorded was 39·77 in 1912 (against 35·69 in 1911), next to that of 1906 (54·07), but higher than in any intermediate year. The mortality in the year under review was 38,954 against 34,961 in 1911; being 3,993 higher than in the latter year and the highest recorded since 1906. Compared, however, with the mean of the preceding ten years (1902—1911) it shows a diminution of 3,442.

The mortality of the City fell from 79,350 in 1900 (death-rate 96·55) to 59,495 in 1901 (death-rate 76·66) to 52,874 in 1906 (death-rate 54·07) to 38,271 in 1908 (death-rate 39·13) to 34,878 in 1909 (death-rate 35·66); it exhibited a slight upward trend in the next two years, 34,933 (death-rate 35·72) in 1910 and 34,961 (death-rate 35·69) in 1911 and suddenly rose to 38,954 (death-rate 39·77) in 1912.

Compared with 1911, the year was marked by increased mortality from almost every disease, with the exception of Measles and Plague, which recorded a decrease of 442 and 2,289 deaths respectively.

Over 53 per cent. (or 2,129 deaths) of the total increase (3,993 deaths) was registered among childern under five years, of whom 14,476 died during the year; the mortality among these was more than 37 per cent. of the total mortality of the City.

Very large increases were registered under Cholera (+1,667), Diarrhœa and Dysentery (+1,469) and the Diseases of the Respiratory System (+1,046). The number of deaths registered from Cholera (1,790) was the highest since 1901; that from Diarrhœa and Dysentery (4,544) and from the Diseases of the Respiratory System (9,686) the highest since 1906.

Among other and smaller increases may be mentioned those of 536 under Small-pox, 439 under Fevers, 225 under Debility, 301 under Old Age, 230 under Diseases of the Nervous System, 276 under other General Diseases, 155 under Diseases of the Digestive System, 82 under those of the Urinary System and 78 under Puerperal Septicæmia.

Correction in the number of Deaths.

The figure of 38,954, however, represents the gross mortality of the City and is subject to correction as it includes 1,022 deaths among persons newly arrived and not belonging to it. It is necessary therefore to delete such deaths and, on the other hand, include those among persons who, belonging to the City, died outside it; but, for obvious reasons, it is not feasible to do more in this respect than get at the number of such of those as died at the several outlying Sanatoria, where they may have been for treatment or change of air.

Letters of enquiry were, as in previous years, addressed to the Authorities in charge of such Institutions at (1) Deolali, (2) and (3) Nasik, (4) Dumas (Surat), (5) Khandala, (6) Poona, (7) Coorla, (8) Dharampur (Simla Hills), (9) Panchgani, (10) Karla, (11) Lonawala and (12) Bandra.

The replies received from ten of them show that 8 deaths occurred during 1912 among persons of this City at those Institutions. Subject to this correction, the number of deaths for the year, therefore, works out to (38,954+8—1,022=) 37,940, giving, the ratio of 38·73 per 1,000 of persons living.

TABLE OF PERCENTAGES TO THE TOTAL MORTALITY BY AGE-PERIOD IN 1910, 1911 AND 1912.

Age-Period.	1910.		1911.		1912.					
					Males.		Females.		Persons.	
	Total Mortality.	Percentage.	Total Mortality.	Percentage.	No. of deaths.	Percentage.	No. of deaths.	Percentage.	No. of deaths.	Percentage.
Under 1 year... ...	8,253	23·62	8,120	23·22	5,004	28·46	4,642	26·33	9,646	24·76
1 to 5 years ...	4,001	11·45	4,227	12·09	2,288	10·72	2,542	14·42	4,830	12·39
5 to 10 ,, ...	1,173	3·35	1,231	3·52	551	2·58	697	3·95	1,248	3·20
10 to 15 ,, ...	1,358	3·88	1,383	3·95	622	2·91	594	3·37	1,216	3·12
15 to 20 ,, ...	2,847	8·14	2,850	8·15	1,496	7·01	1,307	7·41	2,803	7·19
20 to 30 ,, ...	5,980	16·97	6,149	17·58	3,799	17·81	2,717	15·41	6,516	16·72
30 to 40 ,, ...	3,751	10·73	3,748	10·72	2,562	12·01	1,449	8·22	4,011	10·29
40 to 50 ,, ...	2,601	7·44	2,376	6·79	1,830	8·57	929	5·27	2,759	7·08
50 to 60 ,, ...	2,192	6·27	2,323	6·23	1,457	6·83	1,008	5·71	2,465	6·32
60 years and upwards.	2,815	8·06	2,679	7·67	1,710	8·01	1,739	9·86	3,449	8·85
Unspecified Ages ...	12	0·03	15	0·04	10	0·04	1	...	11	0·02
Total ...	34,933	100·0	34,961	100·0	21,829	100·0	17,625	100·0	38,954	100·0

Mortality by Sex & Age-group.

It will be found from the foregoing Table that, of the total number of 38,954 deaths in the year, 21,329 were among the male population and 17,625 in the female against 19,526 male and 15,435 female deaths in 1911. The male death-rate works out to 33·31 and the female to 51·96 per 1,000 of sex population against 30·49 and 45·50 respectively in the preceding year.

There is a preponderance of female deaths over male in the age-groups of 1-5 and 5-10 year and under 60 years and beyond as in previous years; in respect to all other age-groups the predominance is reversed. It will also be noticed that in the age-group of 40-50 years the male mortality (1,830) is almost the double of that among females.

If the foregoing Table be scrutinized, it will also be found that the highest percentage of deaths to the total mortality in the male (23·46) as well as in the female (26·33) and the entire population (24·76) occurred, as usual, among children in the first year of life; the next highest (male 17·81, female 15·41 and whole population 16·72) was recorded in the age-period of 20-30 years. This uniformity in the excessive mortality in the two sexes is peculiar to these two age-periods only; the next highest percentage of deaths (12·01) occurred among males in the age-group of 30-40 years, but among females (4·42) in the age-period of 1-5 years.

The lowest percentage of mortality among males (2·58) occurred during 5-10 years of life and among females (3·37), as well as in the entire population, in the age-period of 10-15 years.

Infant Mortality.

The total mortality among infants or children up to one year of age was 9,646 in 1912; exceeding that for 1911 by 1,526. It was 1,295 higher than the average (8,351) of the preceding quinquennium (1907—1911), 569 more than the decennial mean (9,077) and the highest in any year during that period except in 1905 (10,664) and 1906 (11,106). The percentage of infant mortality to total mortality at all ages was 24·76 and the highest since 1902.

The causes of this serious increase in infant mortality may be investigated with the aid of the Tables that follow.

From Principal Causes.

INFANT MORTALITY FROM PRINCIPAL CAUSES 1907 TO 1912.

Cause of Death.	1907.	1908.	1909.	1910.	1911.	Average (1907-1911).	1912.	Increase or Decrease.
Small-pox	19	236	134	264	98	150	274	+ 124
Measles	35	238	27	56	233	118	82	— 36
All Fevers	193	229	192	238	251	220	277	+ 57
Diarrhoea and Dysentery	745	763	611	674	581	675	900	+ 225
Premature Birth	186	179	151	147	175	167	219	+ 52
Debility	2,850	2,872	2,626	2,567	2,364	2,656	2,581	— 75
Diseases of the Nervous System ...	1,237	1,403	1,466	1,402	1,400	1,381	1,570	+ 189
Do. Do. Respiratory System	2,516	2,557	2,231	2,292	2,364	2,392	2,877	+ 485
All causes	8,276	9,077	8,030	8,253	8,120	8,351	9,646	+ 1,295

It will be noticed from the foregoing Table, that Debility and the Diseases of the Nervous and Respiratory Systems are, as usual, responsible, in the aggregate, for nearly 73 per cent. (7,028 deaths) of the total infant mortality (9,646): 7,028 deaths out of 9,646 against 6,128 out of 8,120 in 1911, and 6,261 out of 8,253 in 1910.

Unlike 1911, the year under notice was marked by the epidemic incidence of Small-pox, so that the mortality from this Disease (274) was nearly treble that in 1911 (98) and exceeded the average of the preceding quinquennium by 124; it was, moreover, the highest since 1907, as was also that from Fevers (277), Diarrhœa and Dysentery (900), Diseases of the Nervous (1,569) and Respiratory Systems (2,877); and the mortality due to immaturity at birth.

The mortality from Measles (82) though higher than in 1907 (35), 1909 (27) and 1910 (56), was lower than in other years and 36 below the average of the preceding five years ; that from Debility exhibited a steady decline from 1908 onward and, though in 1912 slightly exceeded that of 1910, it was 75 less than the quinquennial average.

The mortality among children born prematurely was in 1910, (147) almost the same as in the preceding year (151) but steadily increased since then to 175 in 1911 and 219 in the year under review.

The percentage of deaths from Diarrhœal Diseases among infants to total infant mortality was 9·33 in the year under review and the highest since 1906 (11·12.)

TABLE OF DEATHS AMONG INFANTS FROM PRINCIPAL CAUSES BY AGE-PERIODS IN 1912 AND 1911. By age-periods.

Age-Period.	Year.	Small-pox.	Measles.	Malaria.	Ague and Remittent Fever.	Diarrhœa and Dysentery.	Premature Birth.	Debility.	Nervous System.	Respiratory System.	All Causes.	Percentage of deaths in each age-period to total deaths under 1 year of age.
1 to 30 Days ...	1912	10	1	...	20	51	218	2,152	347	70	2,937	30·44
	1911	4	1	1	51	45	173	2,086	340	63	2,815	34·66
1 to 6 Months ...	1912	121	17	7	83	258	1	354	903	1,247	3,188	33·04
	1911	39	37	2	93	171	2	224	743	932	2,426	29·87
7 to 12 Months ...	1912	143	64	17	145	591	...	75	320	1,560	3,531	36·50
	1911	55	195	6	97	265	...	54	317	1,369	2,879	35·45
Total ...	1912	274	82	24	248	900	219	2,581	1,570	2,877	9,646	...
	1911	98	233	9	241	581	175	2,364	1,400	2,564	8,120	...

The foregoing Table gives the mortality from principal causes in 1912 among infants, arranged under three age-periods of 1-30 days, 1-6 months and 1-12 months. The corresponding figures for 1911 have been inserted for comparison.

From an examination of the figures, it will be found that the mortality from every cause of death was higher in 1912 than in the preceding year, except under Measles whose diminished prevalence in the year under notice explains the comparatively low figure of 82 against 233 in 1911 ; that the heaviest mortality from Small-pox (143), Measles (64), Malaria (17), Ague and Remittent Fevers (145), Diarrhœa and Dysentery (591), Respiratory Diseases (1,560) occurred in the age-period of 7-12 months, while deaths due to the Diseases of the Nervous System were most numerous in the age-group of 1-6 months, as those due to Debility were in the first 30 days ; and that out of 219 deaths due to immaturity at birth 218 occurred in the first month of life and the only other death in the next stage.

The smallest percentage of total infant mortality (30·4) was registered among children 1-30 days old, and the highest (36·5) in the age period of 7-12 months.

The study of the subject may be pursued with the help of the next Table, which shows the percentage or proportion of mortality under each cause of death to the total mortality from all causes among infants in each age-group.

TABLE OF PERCENTAGES OF INFANT DEATHS FROM PRINCIPAL CAUSES IN 1912.

Age Period.	Small-pox.	Measles.	Malaria.	Ague and Remittent Fever.	Diarrhœa and Dysentery.	Premature Birth.	Debility.	Nervous System.	Respiratory System.	All Causes.
1 to 30 days	·34	·03	...	·68	1·73	7·42	73·27	11·81	2·38	30·44
1 to 6 months	3·79	·53	·21	2·60	8·09	·03	11·10	28·32	39·11	33·04
7 to 12 months	4·06	1·81	·48	4·11	16·78	...	2·13	9·08	44·30	36·50
Total ...	2·84	·85	·24	2·57	9·33	2·27	26·75	16·27	29·82	...

Scrutinizing the foregoing Table with the aid of the one preceding it, it will be found that out of 21,518 children registered as born during the year; (*i*) 2,937, or 122 more than in 1911, died within the first month of life; for nearly three-fourths of these (2,152 or 73·27 per cent., against 2,086 or 74·1 in 1911), the cause of death assigned was Debility; that is, want of vitality, immaturity at birth, wilful or ignorant neglect and the methods adopted by the unskilled or untrained women attending the labour; (*ii*) 3,188 or 762 more than in 1911 died before attaining the age of six months; the cause of death, in the descending order of incidence, being 39·11 Diseases of the Respiratory System (against 38·41 in 1911), 28·32 Diseases of the Nervous System (convulsions) against 30·62 in 1911, 11·10 Debility (against 9·23 in 1911) and 8·09 Diarrhœa and Dysentery against 7·04 in the preceding year; (*iii*) 3,521 of the children or 642 more than in 1911 died before reaching the age of twelve months; the cause of death being 44·30 Diseases of the Respiratory System (against 47·55 in 1911), 16·78 Diarrhœa and Dysentery (against 12·67 in 1911) and 9·08 Diseases of the Nervous System (convulsions) against 11·01 in 1911.

As usual, in the first group the maximum mortality is due to Debility; in the second and third it is associated with the Diseases of the Respiratory System. The next most fatal cause is Diseases of the Nervous System in the first and second groups; and Diarrhœa and Dysentery in the third: all of which signify exposure and defective feeding.

Infant Mortality by Months

TABLE OF INFANT MORTALITY BY MONTHS—IN 1912 AND 1911.

MONTHS.	1912.						1911.
	Debility.	Nervous Diseases.	Respiratory Diseases.	All Causes.			All Causes.
				Males.	Females.	Total.	
January	261	140	205	397	403	800	652
February	204	107	182	361	320	681	667
March	199	130	235	427	390	817	780
April	193	149	313	479	486	965	702
May	181	159	294	464	442	906	650
June	211	154	306	481	401	882	565
July	229	167	296	498	450	948	711
August	245	155	272	501	445	946	670
September	256	116	209	412	383	795	603
October	233	106	188	367	323	690	656
November	209	90	204	334	318	652	644
December	160	97	173	283	281	564	820
Total	2,581	1,570	2,877	5,004	4,642	9,645	8,120

The preceding Table exhibits the monthly variations of mortality among infants; three columns giving the number of deaths from causes most fatal to children have been added for the light they throw on the monthly fluctuations.

Compared with 1911, infant mortality in 1912, was higher, month for month, throughout the year, except in December. It was very much so in the months of January (+148), April (+263), May (+256), June (+317), July (+237), August (+276) and September (+192); the increases were inconsiderable for February (14), March (37), October (34) and November (8). December which was responsible for the highest monthly mortality (820) in 1911, registered the lowest (564) in the year under report.

THE INCREASES WERE AS UNDER:—

Months 1912.	Small-pox.	Diarrhœa and Dysentery.	Debility.	Diseases of the Nervous System.	Diseases of the Respiratory System.
January	10	35	68	14	36
April	56	38	27	32	101
May	26	32	23	30	103
June	17	21	40	62	150
July	10	19	47	57	79
August	1	45	26	51	89
September	1	55	30	9	46

Increases were registered under almost every cause of death. Measles alone shows diminution of any note (—151) in the year; the only other cases of decrease were trivial: Influenza (—4), Diseases of the Circulatory System (—5), Tubercular Diseases (—1) and "other local diseases" (—1).

It is necessary to remark that the meteorological conditions of the year, which favoured high general mortality, were specially prejudicial to infants, as they were also to children between 1 and 5 years of age. The influence of these conditions was further aggravated by the operation of other causes at particular periods, notably the epidemic incidence of Small-pox from the last week of February to the close of May, which caused during these months 213, out of 274, infantile deaths in the whole year; the excessive heat in May and the early part of June the scanty rain-fall and the unusual warmth of Summer and Autumn, which led to a serious increase, especially among infants, in Diarrhoeal Diseases which registered (900) the highest number of infant deaths since 1907.

Infant Mortality by Race or Caste

TABLE OF MORTALITY AMONG INFANTS AND DEATH-RATE FOR 1,000 of BIRTHS REGISTERED IN EACH RACE IN 1911 AND 1912.

	RACE OR CASTE.	1911.			1912.		
		Deaths under 1 year.	Number of Births registered.	Infant mortality per 1,000 of Births *in the caste.*	Deaths under 1 year.	Number of Births registered.	Infant mortality per 1,000 of Births *in the caste.*
HINDUS.	Jains	326	342	953·2	334	278	1,201·4
	Brahmins	270	423	638·2	343	542	632·8
	Lingaits	27	64	421·8	46	41	1,121·9
	Bhatias	70	160	437·5	52	130	400·0
	Hindus of other Castes ...	3,817	10,095	378·1	4,532	10,167	445·7
	Hindus, Low Caste ...	1,174	2,879	407·7	1,690	3,306	511·1
	Mussalmans (including Negro-Africans) ...	1,675	4,311	388·5	1,753	4,157	421·6
	Parsees	277	1,487	186·2	279	1,353	206·2
	Jews	33	209	157·8	68	225	302·2
	Native Christians	365	1,061	344·0	459	993	462·2
	Eurasians...	27	93	290·3	33	85	388·2
	Europeans	40	231	173·1	47	226	207·9
	Buddhists	1	8	125·0	...	1	.....
	Other and unknown Castes	18	13	1,384·6	10	14	714·2
	Total ...	8,120	21,376	379·8	9,646	21,518	448·2

The preceding Table gives the number of deaths among infants and of births registered in the different races comprising the population of this City, and the death-rates calculated per 1,000 of births registered in the particular race or caste; corresponding figures for 1911 have been added for comparison.

What arrests attention in the examination of the Statement is the excess in the number of infantile deaths among Jains and Lingayets over that of births registered among them: 334 and 46 infantile deaths against 278 and 41 births respectively. This excess is interesting chiefly as confirming the observation recorded above: that several children born in Bombay escape registration and a large number born outside the City are brought into it, thus adding to its infant population, and several of them dying swell the infant mortality. For the excess noted above among Jains, for example, could not have been due entirely to children born in 1911 dying in 1912; as in 1911 the excess of births over infant deaths in the community was only 16.

Passing on, a slight improvement compared with 1911 is noticed in the infantile death-rate among Brahmins and Bhatias—from 638·2 and 437·5 to 632·8 and 400—in the year under report. In other communities considerable enhancement was registered.

The lowest death-rate (206·2) was registered among Parsee infants and a slightly higher (207·9) among European; the next higher (302·2) was among Jews and 388·2 among Eurasians. Excepting Jains and Lingayets, the highest death-rate was recorded among Brahmins (632·8) and the next highest for Hindus, low caste, (407·7).

Infant Mortality by Sections:—

The following Table gives the ratio of deaths among infants in each Section of the City to the number of births registered in that particular Section. Such an estimate of infant mortality, based on the number of births registered, cannot be considered altogether reliable in view of the following factors, which can neither be eliminated nor even approximately assessed; the difficulties in the way of complete registration of all births occurring in the City, consequent on parental ignorance or neglect; the prevailing custom of sending prospective mothers home to their native districts for confinement, so that there is always an excess of infants in the City over births actually occurred and registered in it; the inflation of the infantile death-rate due to out-born infants dying in the City; and in the discussion of infant mortality by Sections, there is, further, the element of intersectional movement of population, neither uncommon nor infrequent, making it possible for infants of one Section of the City to die in another and thus affect its death-rate. Bearing these considerations in mind, which inevitably introduce an element of error or uncertainty in the measurement of infant mortality based on the registered number of births, we may proceed to discuss the following Table:—

STATEMENT OF THE RATIO OF DEATHS AMONG CHILDREN UNDER 1 YEAR PER 1,000 OF BIRTHS REGISTERED IN EACH SECTION IN 1911 AND 1912.

Ward.	Sections.	1911.	1912.	Ward.	Sections.	1911.	1912.
A	Upper Colaba	227·8	182·6	E	Mazagon	372·1	433·0
	Middle and Lower Colaba.	337·9	405·7		Tarwadi	485·9	565·7
	Fort, Southern	285·7	333·3		Second Nagpada	402·5	462·0
	Fort, Northern	385·3	423·6		Kamatipura	419·1	555·8
	Esplanade	477·3	400·0		Tardeo	455·7	462·2
					Byculla	290·3	420·9
B	Mandvi	571·7	671·4		First Nagpada	308·3	464·5
	Chukla	500·0	470·9				
	Umarkhadi	406·6	478·0	F	Parel	357·8	419·5
	Dongri	492·1	665·5		Sewri	370·2	537·6
					Sion...	328·9	359·9
C	Market	510·2	590·6				
	Dhobi Talao	308·4	380·3	G	Mahim	272·9	292·4
	Fanaswadi	381·9	351·1		Worli	370·8	450·9
	Bhuleshwar	454·9	487·0				
	Khara Talao	468·6	468·0		Harbour and Docks ...	...	...
	Kumbharwada	468·6	513·2		Railways and Homeless		
D	Khetwadi	299·6	343·1				
	Girgaum	373·8	405·1		Total ...	379·8	448·2
	Chowpati	320·7	359·4				
	Walkeshwar	192·9	297·2				
	Mahalakshmi	344·9	411·7				

The rate of infant mortality for the whole City in 1912 based on the number of births actually registered was 448·2 against 379·8 in 1911, 413 in 1910 and 450·1 in 1908; and the Sections with a higher incidence of such mortality during the year under report are: (1) all the Sections of B Ward (Mandvi 671·4, Chukla 470·9, Umerkhadi 478 and Dongri 665·5); (2) Market 590·6, Bhuleshwar 487, Kharatalao 468 and Kumbharwada 513·2 in C Ward; (3) Tarwadi 565·7, Second Nagpada 462, Kamathipura 555·81, Tardeo 462·2, and first Nagpada 464·5 in E Ward; (4) Sewri 537·6 in F Ward; and (5) Worli 450·9 in G Ward.

All these are among Sections which usually register a high death-rate—being largely inhabited by the poor and ignorant classes, living in insanitary houses and amidst similar surroundings.

The whole of A and D Wards registered a lower death-rate; as also Dhobi Talao (380·3) and Fanaswadi (351·1) in C Ward, Mazagaon 433, and Byculla (420·9) in E Ward, Parel (419·5) and Sion (359·9) in F and Mahim (292·4) in G Ward.

Compared with last year, all the Sections of the City show a higher death-rate among infants, except Upper Colaba (183·6) and Esplanade (400) in A Ward; Chukla (470·9) in B Ward; Fanaswadi (351·1) and Khara Talao (468) in C Ward which exhibit some improvement.

Corrected Infant Mortality.

Infant mortality has been calculated above on the actual number of births registered; but for a correct estimate it has to be calculated on the corrected number of births, including infants who may have died during the year without their births being registered. The corrected number of births for 1912 was, as we have seen, 29,920 and gives an infant mortality of 322·3 per 1,000 of such births against 288·8 in 1911.

Measures to control Infant Mortality.

During the year, the efforts of the Health Department to combat causes and conditions contributing to high infant mortality were continued with unabated vigour. More frequent visits to chawls of the poor were paid by the Municipal Nurses and more homely talks were given. The more enthusiastic of the Nurses delivered at intervals lectures in crowded localities to tenants of adjacent chawls on the care and rearing of infants, on the importance of domestic and personal hygiene, on the value of vaccination and kindred subjects.

The following Statement tabulates the work of the Municipal Nurses and Midwives in regard to attendance at birth and infant visitations. It is their duty to find out and advise prospective mothers as well as attend on confinements, and repeat their visits during and after the lying-in period; to find out as far as possible and warn against the pre-natal and post-natal influences adverse to infant life :—

Summary of inquiries and of work of Municipal Nurses and Midwives.	1909.	1910.	1911.	1912.
Total number of Births (including still-born) registered.	21,645	21,505	23,135	23,186
Percentage of still-births to the total number of Births registered	8·34	7·28	7·60	7·19
Number verified by the Nurses	13,677	12,762	13,578	14,417
Percentage of the number verified to the total	63·1	59·3	58·7	62·1
Do. Confinements unattended	18·0	15·2	12·7	13·0
Do. do. attended by unskilled women.	58·3	59·6	60·7	59·6
Do. do. do. do. qualified Nurses (including Municipal).	11·3	12·0	13·2	13·0
Do. Confinements attended by the Municipal Nurses.	4·5	5·6	5·5	6·6
Do. Children born in Hospitals	12·3	13·2	13·2	13·5
Do. do. born in healthy condition	67·8	68·9	74·9	73·7
Do. do. fed on breast	64·9	59·8	69·7	66·5
Do. do. dying within 30 days...	12·3	11·8	11·5	11·8
Do. cases where the mothers left home for work.	31·3	27·9	34·4	29·7

If the preceding Statement be scrutinized, it will be found that out of the total number of 23,186 births registered (including still-births), 14,417 or 62·1 per cent. were visited by the Nurses and Midwives of the Department. The number verified is higher than in any previous year since Infant Visitation was started in June 1908.

The proportion of still-births which showed an upward tendency in 1911 declined to 7·19 in the year under review and was the lowest since 1909. This decline may possibly be accounted for by the increasing proportion of births with skilled attendance.

Compared with 1911, a trifling rise is visible in the proportion of births wholly unattended, but it is (13·0) lower than in any other year. The percentage of confinements attended by unskilled women (60·7), which had registered a slight increase in 1911, veered back to the figure of 1910 (59·6). The most satisfactory feature of the Table, however, is the continuous and uninterrupted rise it reveals in the proportion of births attended by qualified midwives: from 11·3 in 1909 to 12 in 1910 and from 13·2 in 1911 to 13·9 in the year under notice.

The percentage of births in Hospitals, which was steady in the preceding two years (13·2), rose to 13·5 and was higher than in previous years; while the proportion of births attended by Municipal Midwives (6·6) was much higher than ever before.

The percentage of children born in a healthy condition (73·7) was smaller than in 1911 but higher than in 1909 or 1910.

Though the percentage of mothers who left home for work declined considerably (29·7) below that in 1911 (34·4), the proportion of children fed on breast (66·5) exhibits no improvement over the figure of the preceding year (69·7). It has on the contrary declined to 66·5; concurrently, there has been a slight rise in the proportion of children dying in the first month of life.

Factors responsible for high Infant Mortality.

Infant mortality has been observed to be very high in Sections inhabited largely by the poor and ignorant classes: for the death-rate varies inversely as the social status of the population. It is therefore clear that to tackle the problem of high infant mortality with any hope of success, the efforts of the Department must be directed simultaneously against the two factors which are mainly responsible for it, namely, Poverty and Ignorance.

Our Nurses and Midwives have been doing their best to educate the poorer classes in the upbringing of their children; their labours are considerably supplemented by those of Lady Health Visitors of the Bombay Sanitary Association, who are likewise charged with the duty of visiting the homes of the poor to acquaint themselves with their ways of life, their environment and their physical and economic conditions and to teach them to endeavour and live a cleaner and more orderly life. But it is not only instruction in feeding and rearing their children and in personal and domestic hygiene that the poor women require but skilled nursing and hospital accommodation and assistance during their illness and financial relief to assist them in feeding their children while the mothers are at work. The homes of the poor consist for the most part of single rooms with scarce accommodation enough at ordinary times for those living in them and are by no means the proper place for lying-in-women.

I have in previous Reports repeatedly pointed out the practical remedies undertaken in other Cities and declared by experience to be successful. The realisation of these suggestions seems far distant. I would, however, suggest the advisability of a Committee being appointed to consider and advise on the best means to be adopted to improve the condition of the women during labour and their infants during infant life. The question is well worth the consideration of the Corporation and of enormous importance to the community and unless it is taken up seriously it is hopeless to expect any improvement.

Meanwhile, a sum of Rs. 1,000 has been provided, at my suggestion, in the current year's Budget (1913-14) towards providing a room in a chawl and certain comforts for the poorer class of women during confinement.

Mortality in Hospitals.

The subjoined Statement gives the number of deaths in Hospitals from various diseases during 1912 and compares them with those in the preceding year.

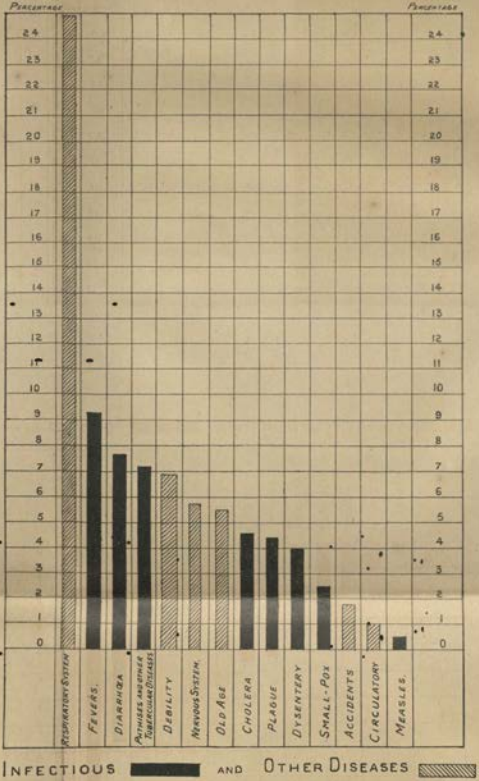
Hospital deaths in the year under report numbered 3,712 against 3,279 in 1911 and their proportion to the total mortality was 9·52 against 9·37 in the preceding year.

It may be mentioned that the figure of Hospital deaths for the year was the highest since 1907.

Causes of Death.	1911.		1912.	
	Hospital Deaths.	Total Mortality.	Hospital Deaths.	Total Mortality.
Still-birth	302	1,759	348	1,668
Small-pox	86	443	175	979
Measles	8	652	2	210
Plague	469	4,006	187	1,717
Fevers	212	3,146	194	3,585
Cholera	20	123	247	1,790
Diarrhœa and Dysentery	388	3,075	518	4,544
Puerperal Septicæmia...	17	339	22	417
Leprosy	68	88	79	96
Premature Birth	114	175	127	219
Other General Diseases	447	7,329	479	8,137
Diseases of the Nervous System	85	2,006	133	2,236
,, ,, Circulatory System	72	351	97	388
Phthisis	282	2,078	356	2,179
Other Diseases of the Respiratory System	469	8,640	526	9,626
Diseases of the Digestive System	226	1,205	223	1,360
,, ,, Urinary System	70	300	95	382
,, ,, Generative System	30	138	36	156
Other Local Diseases	50	133	68	170
Injuries	165	702	148	680
Unspecified Causes	1	32	...	23
Total (except Still-born) ...	3,279	34,961	3,712	38,954
Percentage to the Total Mortality ...	9·37	...	9·52	...

DIAGRAM

SHOWING PERCENTAGES OF DEATHS FROM PRINCIPAL CAUSES TO THE TOTAL MORTALITY OF BOMBAY IN 1912.



INFECTIOUS AND OTHER DISEASES

TABLE OF DEATHS AND DEATH-RATES FROM SOME OF THE PRINCIPAL CAUSES OF DEATH IN 1912 COMPARED WITH THOSE IN 1911 AND THE AVERAGE OF THE PRECEDING 10 YEARS.

Principal Causes of Death.

Causes of Death.	1911.		1912.		Average of 10 years 1902 to 1911.	
	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.	Number of Deaths registered.	Rate of Mortality per 1,000 of Population.
Small-pox	443	·45	979	·99	780	·86
Measles	652	·66	210	·21	521	·58
Fevers (including Scarlet, Enteric, Malaria, Ague, Remittent and Relapsing).	3,146	3·21	3,585	3·66	3,405	3·79
Cholera	123	·12	1,790	1·82	306	·34
Plague	4,006	4·09	1,717	1·75	9,777	10·89
Phthisis	2,078	2·12	2,179	2·22	2,793	3·11
Diseases of the Nervous System ...	2,006	2·04	2,236	2·28	2,193	2·44
„ „ Respiratory System.	8,640	8·82	9,686	9·88	8,532	9·50
Diarrhœa	2,078	2·12	2,987	3·04	2,173	2·42
Dysentery	997	1·01	1,557	1·58	1,130	1·25
Accidents	702	·71	680	·69	691	·77
All other causse (except Still-birth).	10,090	10·30	11,348	11·58	10,095	11·25
Total ...	34,961	35·69	38,954	39·77	42,396	47·25

In considering the incidence of the principal causes of death in relation to the total mortality of the City, the Diseases of Respiration will appear to have made the largest contribution to it—9,686 deaths against 8,640 in 1911, the rate of mortality being 9·88 against 8·82.

From 1906 onward Plague contributed, next after the Diseases of the Respiratory System, the largest proportion of deaths ; but in 1912 it shrank to such small proportions that we find its incidence overshadowed by many another cause of death : by Fevers which caused 3,585 deaths (against 3,146 in 1911), by Diarrhœa which registered 2,987 deaths (against 2,078 in 1911) ; by the Diseases of the Nervous System to which 2,236 deaths were ascribed (against 2,006 in the preceding year) ; by Phthisis which recorded 2,179 deaths (against 2,078 in 1911); and by Cholera which caused 1,790 deaths (against 123 in 1911).

Except in the case of Measles, Plague, and Accidents, which recorded the decreases of 442, 2,289 and 22, respectively, every other cause of death will be found to have registered an increased mortality, compared with 1911.

Small-pox and Plague were epidemic from the last week of February to the close of May, and Cholera in the week ending 13th January and in the 3rd and 4th weeks of May and again from the week ending 15th June to 24th August. The epidemic of Plague was the mildest the City ever had, but Small-pox caused (979) more than twice the number of deaths in 1911 (443). The visitation of Cholera was the severest since 1901 ; it was at its height from 11th to 15th June and registered during the five days 505 attacks and 414 deaths ; thereafter the epidemic gradually abated.

If the figures for 1912 be compared with those of the last column, which gives the mean rates of mortality for the preceding ten years 1902-1911, we shall find that, notwithstanding considerable increases of mortality registered under several causes of death in 1912, there has followed on the whole a notable improvement in the general death-rate of the City, which is 39·77 against the decennial mean of 47·25.

The largest and very substantial reduction will appear to have been achieved in the death-rate from Plague, which is 1·75 against the average rate of 10·89 for the preceding decennium; next, appreciable improvement is visible in case of Phthisis (2·22 against 3·11); Measles (·21 against ·58), Diseases of the Nervous System (2·28 against 2·44), and Accidents (·69 against ·77) are the other causes which have a reduced death-rate.

Mortality from Zymotic Diseases.

The death-rate from Zymotic Diseases steadily declined during 1905-1910 from 27·39 to 9·82. But it rose to 9·92 in 1911 and further to 10·49 in 1912. It was thus higher in the year under notice than the average of the preceding three years (10·23); yet it reveals a substantial improvement over the decennial mean (18·20), equivalent, if expressed in numbers, to a saving to the City of over 6,000 lives.

The mortality from Dysentery was 560 more than that in 1911 and 495 more than the mean of the preceding three years and 427 more than the average of the decennium 1902-1911.

The number of deaths from Puerperal Septicæmia during the year under notice (417) exceeded that for the preceding year by 78 and the last triennial mean by 52 and the decennial by 24. Scarlet Fever, absent for many years, registered a single death. Diphtheria registered an increase of 2 deaths compared with 1911 and Whooping Cough of 17.

Other causes have been dealt with in another connection.

	Number of Deaths registered.			
	1911.	1912.	Average of the last three years (1909—1911).	Average of the last ten years (1902—1911).
Small-pox	443	979	641	780
Measles	652	210	303	521
Plague	4,006	1,717	4,286	9,777
Scarlet Fever	Nil.	1	Nil.	
Enteric Fever	145	152	131	
Malarial Fever	334	360	306	3,405
Ague and Remittent Fever	2,657	3,070	2,546	
Relapsing Fever	10	2	45	
Influenza	9	.....	4	3
Whooping Cough	5	22	7	22
Diphtheria	3	5	1	2
Cholera	123	1,790	319	305
Dysentery	997	1,557	1,062	1,130
Puerperal Septicæmia	339	417	365	393
Total ...	9,723	10,282	10,016	16,339
Death-rate per 1,000 of population ...	9·92	10·49	10·23	18·20

Mortality by Races.

In considering the relative incidence of mortality among the different races that inhabit the City, it will be observed from a study of the following Table, that with the solitary exception of Eurasians, every other community exhibits an augmented death-rate compared with the preceding year.

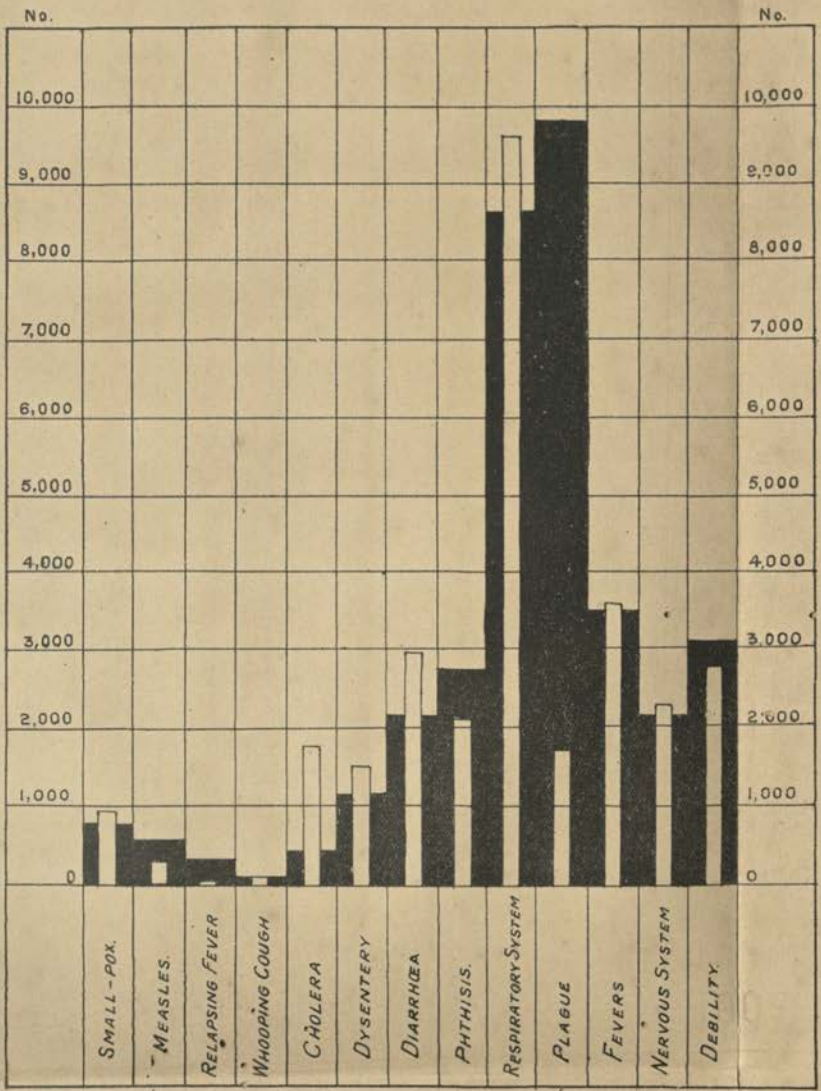
The general death-rate of the City was 39·77. Taking Hindus as a whole, among Mussalmans alone of all the communities was a higher rate registered. Among Hindus, Lingaits, who number only 1,779 by the Census of 1911, returned the highest death-rate (117·04); next, Hindus, low caste (88·06); then Jains (69·11). All other communities returned rates lower than the general death-rate of the City.

Excepting Buddhists, who numerically are a negligible portion of the population (578) and registered the lowest death-rate of 17·30, higher, however, than in 1911 (13·84), Europeans as usual returned the lowest death-rate (21·43) against 20·58 in 1911: their largest contribution to mortality was under Fevers (3·78)—Malaria and Enteric in equal proportion (1·51). The

DIAGRAM

NUMBER OF DEATHS FROM THE ZYMOTIC & OTHER DEATH CAUSES IN 1912

COMPARED WITH THEIR AVERAGE OF THE PRECEDING 10 YEARS.



DEATHS IN 1912. ▭ AVERAGE OF 1902-11 ■

death-rate among Parsees was the next lowest (25·79) as in previous years ; they suffered most from Diarrhœa (2·49), from Fevers (2·39) and Respiratory Diseases (2·35).

Then follow Eurasians whose recorded death-rate (27·69) marks a decrease on that of 1911. They appear to have suffered most from Respiratory Diseases (4·29) ; and from Fevers (3·58) more than any other community except Mussalmans (3·95) ; and more from Malarial Fever (1·67) than any other type or any other community ; and Diarrhœa (2·38).

Native Christians stand next with the death-rate of 38·37. The most fatal causes of death among them being Diarrhœa (4·16) and Small-pox (1·81) to a greater extent than in any other community ; their great susceptibility to the latter disease being due to their not being protected by vaccination in infancy ; they are in consequence generally the worst sufferers in every outbreak of the disease ; Respiratory Diseases (6·05) and Cholera (2·08) next after Mussalmans (Respiratory Diseases 12·42 ; Cholera 2·87) and Jews (Respiratory Diseases 8·94 , Cholera 3·33).

Hindus recorded the next higher rate of mortality (38·43) ; they succumbed more than any other race to Plague (1·96) and Measles (·27 ; they paid heavy toll also to the Diseases of the Respiratory System (10·13) and Phthisis (1·98) less heavy than Mussalmans alone (Respiratory Diseases 12·42; Phthisis 3·99) ; Diarrhœa (3·06) and Small-pox (1·12) which were more fatal to them than to any other community, except Native Christians (Diarrhœa 4·16 ; Small-pox 1·81).

Jews who returned the next higher rate, suffered more from Cholera 3·33 than other communities and most from Respiratory Diseases (8·94) after Mussalmans (12·42).

As in previous years, Mussalmans recorded the highest communal death-rate (50·72 against 46·39 in 1911). For an explanation, we may turn to Table 30 appended to this Report, from which it will be observed that their contributions to total mortality were the heaviest under Phthisis (3·99) and Respiratory Diseases (12·42), for reasons set out in my previous Reports, and under Fevers (3·95). There was also a higher proportion of deaths among them than in any other community, except Hindus, from Plague (1·51) ; except Jews, from Cholera (2·87); except Hindus and Jews, from Diarrhœa (3·02) and Dysentery (2·18).

Compared with the mean of the preceding decennium, we find that (1) all communities registered a much lower death-rate in 1912, except Jews and Europeans ; (2) the improvement in the general death-rate which has followed is a reduction of 7·48, equivalent to a saving to the City of 3,442 lives.

TABLE SHOWING BY CASTE THE NUMBER OF DEATHS AND THE DEATH-RATE FROM ALL CAUSES IN 1911 AND 1912 AND THE AVERAGE OF THE PRECEDING 10 YEARS (1902—1911).

	Race or Caste.	1911.		1912.		Average of last ten years (1902-1911).	
		Number of Deaths.	Rate of Mortality per 1,000 of Population.	Number of Deaths.	Rate of Mortality per 1,000 of Population.	Number of Deaths.	Rate of Mortality per 1,000 of Population.
Hindus.	Jains	1,488	70·28	1,414	69·11	...	...
	Brahmins	1,265	23·57	1,391	25·92	...	...
	Lingaits	114	96·69	138	117·04	...	...
	Bhatias	270	34·70	289	34·57	...	...
	Hindus of other castes	16,570	30·28	18,318	33·47	...	...
	Hindus, low caste	3,740	68·95	4,776	88·03	...	...
Hindus		26,397	34·78	28,306	38·43	29,799	47·24
Mussalmans (including Negro Africans)		8,321	46·39	9,097	50·72	9,244	56·16
Parsees		1,242	24·38	1,314	25·79	1,328	27·6.
Jews		178	26·98	254	38·50	192	34·9.
Native Christians		1,426	34·55	1,584	38·37	1,459	40·91
Eurasians		121	28·89	116	27·69	120	: 2·63
Europeans		246	2·68	255	21·43	229	17·23
Buddhists		8	13·84	10	17·30	10	22·93
Other and unknown castes		22	...	13	...	15	.....
	Total	34,961	35·69	38,954	39·77	42,396	47·2.

Mortality by Months.

TABLE OF DEATHS FROM ALL CAUSES (EXCLUSIVE OF STILL-BORN) BY MONTHS IN 1911 AND 1912.

MONTHS.	Number of deaths in 1911.	Number of deaths in 1912.
January	3,060	3,260
February	3,355	2,956
March	3,947	3,541
April	4,105	3,948
May	3,288	3,524
June	2,105	3,970
July	2,406	3,333
August	2,404	3,380
September	2,363	2,921
October	2,494	2,725
November	2,409	2,650
December	3,025	2,746
TOTAL...	34,961	38,954

For the discussion of monthly variations of mortality during the year, the preceding Table has been given.

It will be observed that the first month of the year recorded an increase of 200 deaths compared with 1911. The high figure for January (3,260) is explained by increased mortality from Respiratory Diseases (893 ; next the monthly maximum of 982 for April) and from Diarrhœa (270 ; next to that in August, 343, and September, 280) ; from Fevers ; and the top mortality from Old Age (221) and Debility (271).

The mortality declined to 2,956 in February, but Small-pox and Plague were increasing and became epidemic towards the close of it.

March 3,541, April 3,948, May 3,524, June 3,970, July 3,333 and August 3,380 witnessed the maximum total mortality.

March, April and May are among the unhealthiest months of the year, when Plague and Small-pox and Measles are at their height.

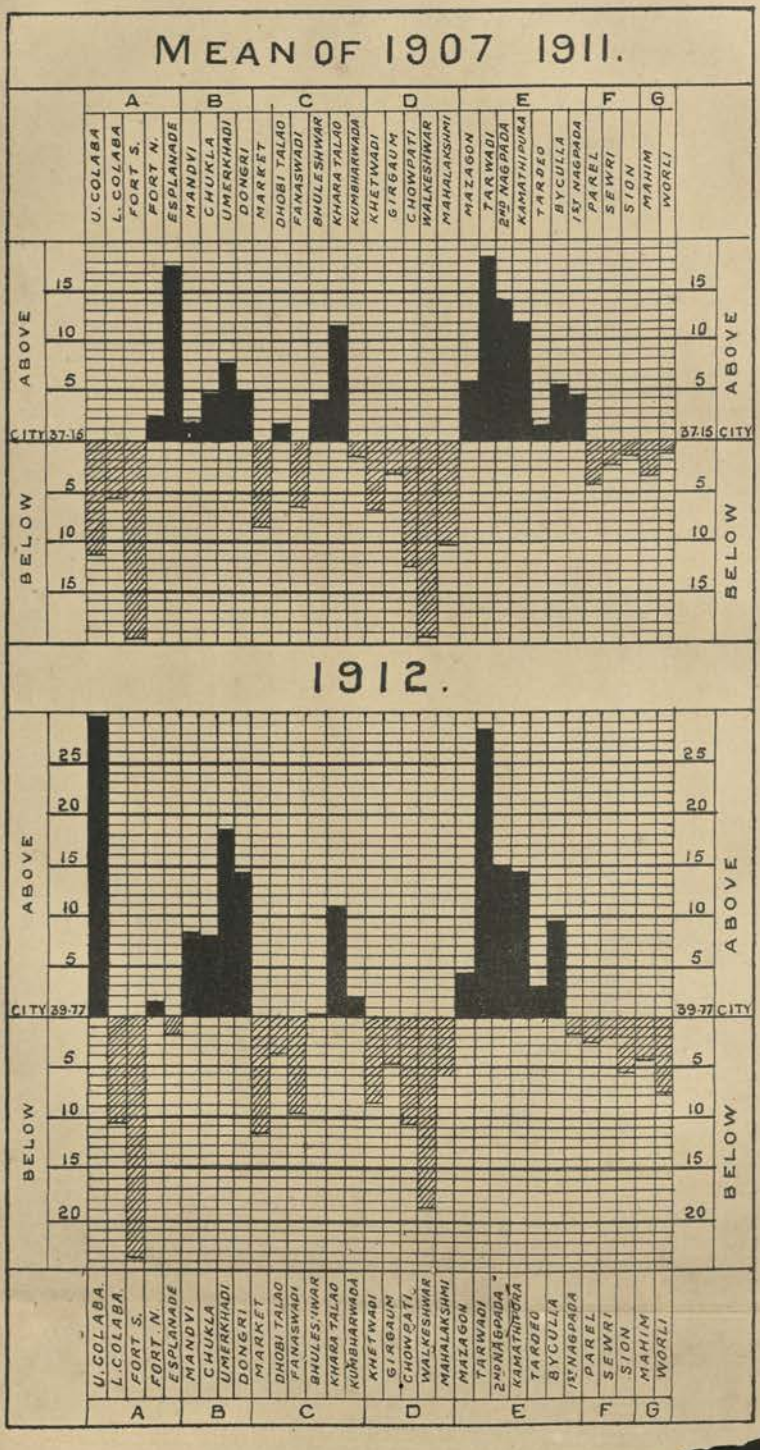
Compared with 1911, there was little Measles in the year ; Plague and Small-pox became epidemic in the last week of February and continued so to the close of May, and contributed the maximum mortality during these months. Cholera was epidemic in the third and fourth weeks of May and contributed 123 deaths in the month ; Plague 306, 611 and 348 ; Small-pox 230, 253 and 171. Concurrently, there was a high incidence of mortality from the Diseases of Respiration ; 888 deaths in March, 928 in April and 829 in May. April was thus marked by maximum monthly mortality from all these Diseases.

The high mortality during the next three months is to be accounted for by (i) the prevalence of Cholera, which though epidemic in the third and fourth weeks of May shrank to the sporadic stage in the following week and continued so until it received a sudden impetus in the second week of June and reaching epidemic proportions again, retained them to the week ending 24th August ; 1,394 of the total of 1,790 deaths from the disease in the whole year

Comparison of Total Death-rates

(including Plague)

of the City and Component Sections



being registered in the three months ; (ii) the excessive heat in May and the early part of June, the effect of which was reflected in increased fatality among infants and children under 5 years, especially from Fevers, Diarrhœa and Respiratory Diseases.

From September, the mortality steadily declined and the lowest figure (2,650) was reached in November. In December it was augmented to 2,746, mainly by repeated importations of Cholera from the Districts—chiefly of Thana and Poona by the Pilgrims from the Fairs at Nirmal and Alandi—so that the mortality from the Disease rose from 12 in November to 79 in December.

Compared with 1911, it will be found that fewer deaths were registered in February (—399), March (—406), April (—157) and December (—279).

The total death-rate for the whole City is 39·77 against 35·69 in 1911.

Mortality Sections.

The only Sections which exhibit any improvement in the death-rate, compared, with 1911, are Fort, North, Market and Fanaswadi, which registered the rates respectively of 41·14, 28·13 and 30·21 against 42·59, 29·43 and 32·62 in 1911. Kumbharwada retained the same rate as in the preceding year (41·69).

The lowest death-rate was returned for Fort, South (16·46) and the highest (69·36) for Upper Colaba.

It is necessary to mention in this connection that the mortality rates of certain Sections are misleading, because inflated ; (1) Upper Colaba (69·36) reveals a large decrease in population as enumerated in 1911 (from 3,775 in 1906 to 1,557, owing chiefly to the exclusion of the military included in previous enumerations (1901 and 1906) ; Esplanade (38·06), Tarwadi (68·07) and Byculla (49·39) ; these Sections contain Hospitals and would exhibit a much lower rate, but for the fact that for want of residential addresses of several patients dying in the Institutions, the deaths have to be referred to the Sections containing the Hospitals instead of to those from whence they came. Esplanade contains the St. George's, Cama and Allbless, Goculdas Tejpal and the Parsi Lying-in Hospitals. Sir Jamsetji Jeejeebhoy, Bai Motlabai and D. M. Petit and the Maratha Hospitals and St. Joseph's Foundling Home are in Tarwadi and the Arthur Road Infectious Diseases Hospital in Byculla.

Compared with the mean rate of the preceding quinquennium, the following Sections show some reduction :—

Section.	Death-rate. (1912).	Mean Death-rate. (1907—1911).
Middle and Lower Colaba...	29·52	31·94
Fort, South	16·46	17·41
Esplanade	38·06	54·59
Market	28·13	28·29
Dhobi Talao	36·11	38·65
Fanaswadi	30·21	30·65
Bhuleshwar	40·26	41·11
1st Nagpada	38·50	41·25
Sion	34·41	35·25
Worli	32·55	35·70

If we turn to Table 3 at the end, we shall find it throw interesting light on the relative incidence of diseases in the different Sections of the City.

It will be observed that Cholera was worst in Umarkhadi (6·41), Mandvi (5·27), Dongri (4·7), and Chukla (3·75)—all in B Ward; Small-pox in Byculla (2·42), Mazagaon (2·26), Parel (2·06), Worli (1·68) and Tarwadi (1·54). Measles was more prevalent in Dongri (1·76) and Mahaluxmi (·72) than in other Sections, while Upper Colaba, Fort, South and North, Market, Walkeshwar and 1st Nagpada were quite free from it. The Sections which suffered most from Plague were Middle and Lower Colaba (3·35), Umerkhadi (3·15), Mahim (2·91), Tarwadi (2·53), Mazagaon (2·32), Dongri (2·31) and Khara Talao (2·30).

The incidence of Malaria was more marked in Esplanade (1·91), Fort, North (1·49), Upper Colaba (1·28) and Fort, South (1·15).

Diarrhœal Diseases levied the heaviest toll in Tarwadi (11·60), Upper Colaba (10·27), Byculla (7·81), 2nd Nagpada (6·72), Mazagaon (6·65), and Dongri (6·56).

The following Sections suffered most from the Diseases of Respiration: Dongri (15·12), Umarkhadi (14·29), 2nd Nagpada (14·19), Mandvi (14·03), Kamathipura (13·71), Byculla (13·64), Chukla (13·37), Tarwadi (13·05).

Phthisis was more in evidence in Umarkhadi (6·06), Kamathipura (5·25), Upper Colaba (5·13), 2nd Nagpada (4·19), Tardeo (3·74), Chukla (3·54), Khara Talao (3·26) and Dongri (3·04); as to other Tubercular Diseases, the following Sections have to be specially mentioned :— Tarwadi (2·63), Upper Colaba (2·56), Esplanade (1·74), Umarkhadi (1·46) and Fort, North (1·18).

Mortality by Place of Birth.

Of the total number of 38,954 deaths in the entire population during the year, 42·96 per cent. or 16,739 deaths occurred among persons born in Bombay, 53·95 or 21,016 among those born outside it; and 3·08 or 1,201 deaths were of persons whose place of birth could not be ascertained.

Plague Mortality.

TABLE SHOWING THE NUMBER OF ATTACKS AND DEATHS FROM PLAGUE SINCE 1896 AND THE TOTAL MORTALITY, EXCLUDING STILL-BORN, SINCE 1891.

	Number of Plague Attacks.	Number of Plague Deaths.	Death-rate from Plague per 1,000 of Population.	Percentage of Deaths to Attacks.	Number of Deaths from all causes (exclusive of Still-born).	Total Death-rate per 1,000 of Population.
1891	...	...	...	...	23,847	29·01
1892	...	...	...	...	26,518	32·26
1893	...	...	...	...	23,142	28·16
1894	...	...	...	...	27,330	33·25
1895	...	...	...	...	25,081	30·52
1896	...	...	2·36	76·10	33,451	40·71
1897	13,314	11,003	13·39	82·64	47,896	58·28
1898	22,130	18,185	22·12	82·17	51,961	63·23
1899	19,451	15,796	19·22	81·20	56,434	68·07
1900	17,913	13,285	16·16	74·16	79,350	96·55
1901	21,006	18,736	24·14	89·19	59,495	76·66
1902	16,423	13,820	17·80	84·15	48,414	62·38
1903	23,344	20,788	26·78	89·05	50,513	65·09
1904	15,488	13,538	17·44	87·40	42,676	54·99
1905	16,308	14,198	18·29	87·06	47,762	61·54
1906	12,323	10,823	11·06	87·82	52,874	54·07
1907	7,353	6,389	6·53	86·88	38,687	39·56
1908	6,134	5,361	5·48	87·39	38,271	39·13
1909	5,864	5,197	5·31	88·62	34,878	35·66
1910	4,130	3,656	3·73	88·52	34,933	35·72
1911	4,503	4,006	4·09	88·96	34,961	35·69
1912	1,936	1,717	1·75	88·68	38,954	39·77

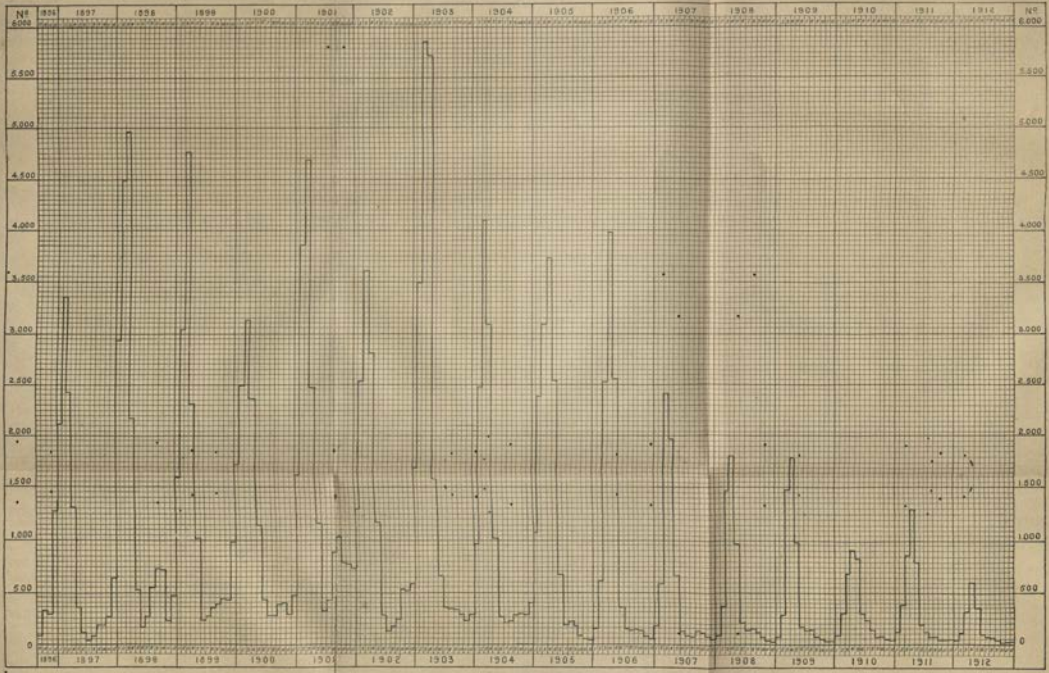
The progressive decline in the mortality from Plague, which was a marked feature of the quinquennial period from 1906—1910, when it reached the lowest figure on record (3,656), was interrupted in the following year by an increase of 350 deaths being registered (4,006). But the ground thus lost was well made up in the period under review, as 2,289 fewer deaths than in 1911 were registered. The low Plague mortality of the year thus beats all previous record; 1,717 deaths having occurred, equivalent to the ratio of 1·75 per 1,000 of the population. This is the most notable and satisfactory feature of the health conditions of the City during the year.

The number of Plague seizures registered in 1912 was 1,936—being, as in the case of deaths, more than 57 per cent. below the figure for the preceding year (4,503). But a survey of the statistical history of Plague in the City embodied in the foregoing Statement shows that though the disease has been brought under such effective control, as evidenced by the enormous reduction in the incidence of it, a corresponding abatement of virulence has not been possible.

DIAGRAM

PLAGUE MORTALITY IN BOMBAY (BY MONTHS)

FROM 1896 (SEPTEMBER) TO 1912.



For the case mortality in the year was 88·68, next only to that of the most fatal years in the history of the disease : 1901 (89·19) and 1903 (89·05), when 59,495 and 50,513 deaths were respectively registered ; excepting 1911 when it was 88·96 representing 4,006 deaths.

Plague by Months.

The monthly variations of Plague mortality are indicated in the following Statement. It will appear that every month registered a much smaller number of deaths than in the preceding year. The maximum monthly mortality was reached in April (611), as in previous years, and the height of the epidemic in the third week of the month ; but the monthly maximum of 1912 was less than half of that in 1911 (1,296), though the difference between the respective minima was a little less (1912 : 19 in October; 1911 : 30 in November).

The disease became epidemic in the week ending 24th February and continued so to the close of May. The highest number of seizures recorded on a single day was 36 on 21st April (against 69 on 4th April 1911) and the maximum number of deaths 34 on the same day (against 71 on 14th April 1911).

Months.	Plague deaths in	
	1911.	1912.
January	112	33
February	386	101
March	872	306
April	1,296	611
May	800	348
June	197	92
July	112	61
August	65	59
September	60	41
October	33	19
November	30	21
December	43	25
Total ...	4,006	1,717

TABLE SHOWING THE DAILY NUMBER OF ATTACKS AND DEATHS FROM PLAGUE AND THE TOTAL MORTALITY EXCLUDING STILL-BORN IN 1912.

Date.	January.			February.			March.			April.			May.			June.			July.			August.			September.			October.			November.			December.		
	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.	Attacks.	Deaths.	Total Mortality.
1	2	1	99	3	3	107	4	4	103	18	17	132	23	16	127	8	4	98	3	1	106	1	1	141	3	3	106	..	..	75	..	..	80	..	..	75
2	..	..	89	4	3	107	2	2	100	20	14	130	20	17	114	5	5	103	3	1	111	1	2	131	..	..	99	2	2	92	2	1	83	1	1	95
3	..	1	131	5	1	87	1	..	79	19	15	120	21	20	114	6	5	91	2	3	97	2	1	104	1	..	101	..	..	89	1	1	62	..	..	101
4	2	1	108	3	3	112	8	8	94	22	22	131	15	15	116	3	4	111	5	2	105	1	..	119	3	3	94	..	..	103	..	1	86	1	1	77
5	2	..	117	2	2	100	4	4	115	23	21	130	17	16	143	6	2	102	8	6	98	3	2	122	2	2	93	1	..	90	1	...	82	..	..	75
6	..	..	112	2	1	97	14	13	131	24	23	121	12	13	130	3	3	96	3	3	88	..	..	101	1	1	96	1	1	75	..	..	94	..	..	94
7	1	1	112	1	1	88	5	3	103	21	19	124	17	16	105	1	2	76	6	8	110	1	2	99	1	1	101	..	1	96	..	..	85	..	..	80
8	2	3	131	1	1	81	6	6	115	12	12	110	14	12	106	9	6	87	..	1	103	..	..	113	1	..	115	1	2	76	..	..	88	..	..	80
9	2	1	114	2	1	103	3	3	106	31	25	130	16	11	106	4	3	109	..	1	106	4	1	93	..	..	95	..	..	90	..	..	79	..	..	85
10	1	1	105	4	3	109	7	3	114	23	23	145	10	12	106	4	4	129	2	1	103	..	1	107	2	1	104	1	1	89	1	..	86	1	1	93
11	..	..	123	..	1	106	6	5	110	25	18	119	12	11	101	4	4	170	1	1	114	4	4	126	1	..	109	2	2	93	1	1	89	3	1	92
12	1	..	94	1	1	91	11	8	131	20	18	127	16	12	118	5	5	247	2	2	105	3	3	108	1	1	103	..	..	96	2	..	115	2	3	86
13	1	1	123	4	3	97	14	13	127	32	29	140	13	12	117	2	2	219	1	2	98	..	1	115	..	2	109	..	..	99	2	2	88	1	1	75
14	..	..	109	0	3	105	10	13	126	28	24	130	11	11	134	3	4	181	2	1	96	2	2	109	3	2	99	1	..	83	2	3	89	3	2	87
15	1	..	87	5	6	95	9	11	137	19	16	142	12	12	115	7	5	191	..	..	94	3	1	93	1	..	90	1	2	120	1	2	91	1	1	99
16	3	1	119	3	3	118	13	10	106	28	27	124	19	19	134	2	2	168	1	1	120	2	1	125	3	3	107	1	1	97	..	1	99	3	3	112
17	..	1	96	5	5	105	9	9	118	19	18	109	7	10	126	..	2	168	..	..	87	1	2	123	3	4	93	2	2	87	..	..	89	..	..	97
18	1	1	112	4	3	102	13	14	115	14	16	125	15	11	128	..	..	147	..	..	104	4	3	105	2	4	106	1	1	87	..	..	107	2	2	89
19	..	..	84	5	5	90	14	12	90	15	15	136	9	4	102	1	1	140	1	1	109	3	3	116	1	1	86	..	..	90	1	1	110	..	..	100
20	1	1	106	7	6	137	13	10	107	29	26	152	14	16	132	1	..	151	4	3	113	3	2	121	3	3	99	..	..	75	2	1	95	1	1	85
21	3	3	113	3	3	99	15	13	128	38	34	141	13	5	114	6	3	125	4	5	115	2	1	102	1	1	87	1	1	77	1	2	98	..	..	85
22	2	2	95	6	5	123	18	19	122	20	17	140	10	9	98	1	1	146	2	1	118	..	..	125	1	1	91	..	..	89	1	..	84	..	..	91
23	4	4	102	8	8	120	5	6	106	32	33	163	12	14	102	5	6	118	2	3	132	5	3	129	2	2	97	2	2	103	..	1	85	1	1	84
24	..	..	97	7	6	107	15	11	123	20	21	153	10	15	112	..	..	128	4	2	109	3	2	119	3	1	95	..	..	96	1	1	85	..	..	81
25	1	1	79	6	4	102	20	21	118	28	22	154	11	9	101	2	1	119	2	2	125	2	3	91	1	1	93	1	1	93	2	2	77	..	..	89
26	3	1	87	6	6	90	29	17	122	23	23	143	2	3	111	6	5	122	2	..	108	7	7	90	..	1	87	1	..	67	..	..	77	2	1	75
27	3	4	114	3	5	92	16	15	110	26	27	128	10	10	109	4	2	112	3	2	105	1	..	105	1	1	103	..	..	69	..	..	83	1	1	81
28	2	2	100	1	3	81	19	18	124	11	9	116	7	6	109	3	5	121	2	3	110	2	3	88	..	..	88	1	..	78	2	1	88	..	..	80
29	1	1	94	3	3	87	18	16	131	15	9	107	5	6	86	4	3	114	1	..	95	4	4	80	1	..	87	1	..	93	..	..	90	1	2	111
30	1	..	116	..	..	..	13	10	104	24	18	117	6	5	110	4	3	88	1	2	121	3	1	86	2	2	84	..	..	77	..	..	91	3	2	101
31	..	1	89	..	..	..	12	9	120	..	..	..	6	7	98	..	..	..	3	3	127	2	2	91	..	..	..	..	..	82	..	..	..	1	1	91
Total ..	40	33	3,260	123	101	2,956	352	306	3,541	677	611	3,948	378	348	3,624	109	92	3,970	70	61	3,333	69	59	3,380	46	41	2,921	21	19	2,725	23	21	2,650	28	25	2,746

Total in 1912.

Attacks.	Deaths.	Total Mortality.
1,936	1,717	38,954

Plague by Races.

Of 1,717 total deaths from Plague, 1,345 occurred among Hindus of all classes against 3,215 in 1911 ; while 271 against 521 in the preceding year were registered among Mussalmans including Negro Africans. Native Christians contributed 58 and Parsees 34 against 164 and 90 respectively in 1911 ; Europeans 3 as in the preceding year, Jews 5 and Eurasians 1 against 6 and 5 in the previous year.

Buddhists registered no death from the disease.

Hindus suffered the most from Plague, as in previous years, and returned the death-rate of 1·91 ; next to them Mussalmans, who registered the rate of 1·51 ; then Native Christians (1·40), Jews (·75), Parsees (·66); Eurasians returned the lowest death-rate from Plague (·23) and after them Europeans (·25), who had hitherto suffered least of all the communities.

Plague by Sex and Age.

The sex distribution of Plague mortality in the year was 1,190 males and 527 females ; the ratio per 1,000 of sex population being males, 1·85 and females 1·55 against 4·41 and 3·46 in 1911.

The proportion of male deaths to female was 2·2 to 1 in the entire population as among Hindus of all castes ; as 3 to 1 among Mussalmans and 1·6 to 1 among Native Christians ; but it was 1 to 2 among Parsees and 1 to 4 among Jews.

There was no death from Plague among European or Eurasian females.

The disease was most fatal to persons between 10 to 35 years of age, as 1,254 or more than 73 per cent. of the deaths occurred among them.

Among infants or children under 1 year of age there were 2 deaths ; in the age-group of 1-10 years 76 male and 86 female ; and in that of 50 and over, 39 male and 22 female deaths were registered.

Plague by Sections.

The death-rate from Plague for the whole population was 1·75 in the year under notice as compared with 4·09 in 1911. Every Section of the City recorded a much lower rate than in 1911. Among Sections with the highest incidence of the disease may be mentioned Middle and Lower Colaba (3·35), Umerkhadi (3·15), Mahim (2·91), Tarwadi (2·53), Dongri (2·31), Mazagaon (2·32) and Khara Talao (2·30).

Compared with the mean rate of the preceding quinquennium, there has followed an improvement of 3·28 in the Plague death-rate of the City ; Upper Colaba alone of all the Sections showing a slightly higher rate.

TABLE SHOWING THE DEATH-RATES FROM PLAGUE IN SEVERAL SECTIONS IN 1911 AND 1912 WITH THEIR QUINQUENNIAL AVERAGE RATES.

Ward.	Section.	1911.	1912.	Quinquennial average (1907-1911).
A	Upper Colaba	6·42	1·92	1·80
	Middle and Lower Colaba	5·23	3·35	6·30
	Fort, Southern	4·04	1·15	3·63
	Fort, Northern	5·07	2·00	4·41
	Esplanade	1·63	·67	2·83
B	Mandvi	4·00	1·95	5·73
	Chukla	3·54	1·73	5·08
	Umarkhadi	5·21	3·15	5·43
	Dongri	4·58	2·31	5·47
C	Market	3·91	1·35	4·87
	Dhobi Talao	5·14	1·65	7·18
	Fanaswadi	5·10	1·93	6·82
	Bhuleshwar	4·03	1·91	7·24
	Khara Talao	5·65	2·30	6·00
	Khumbharwada	5·41	1·66	5·19

Ward.	Section.	1911.	1912.	Quinquennial average (1907-1911).
D	Khetwadi	2·09	1·37	3·27
	Girgaum	2·95	1·75	3·42
	Chowpati	3·33	1·05	3·85
	Walkeshwar	1·31	·65	2·36
	Mahalakshmi	3·61	1·86	3·36
E	Mazagaon	6·45	2·32	7·61
	Tarwadi	4·99	2·53	5·69
	Second Nagpada	2·53	·87	3·91
	Kamatipura	2·58	1·30	4·59
	Tardeo	1·94	1·08	3·84
	Byculla	4·69	2·01	5·53
	First Nagpada	2·18	·82	3·79
F	Parel	5·15	2·08	4·80
	Sewri	4·35	1·25	7·16
	Sion	2·96	·97	4·32
G	Mahim	5·11	2·91	4·70
	Worli	5·28	1·52	5·75
	Harbour and Docks	·06	·08	·11
	Railways and Homeless			
	Total ...	4·09	1·75	5·03

Plague Measures.

As in previous years, the usual preventive and precautionary measures were carried out against Plague in the year under report. Inoculation, Rat Destruction, Evacuation and Disinfection.

(1) Inoculation.

The number of inoculations performed during 1912 was 6,886 against 9,621 in the foregoing year and 5,043 in 1910. Of the total number, 816 inoculations were performed by the District Registrars.

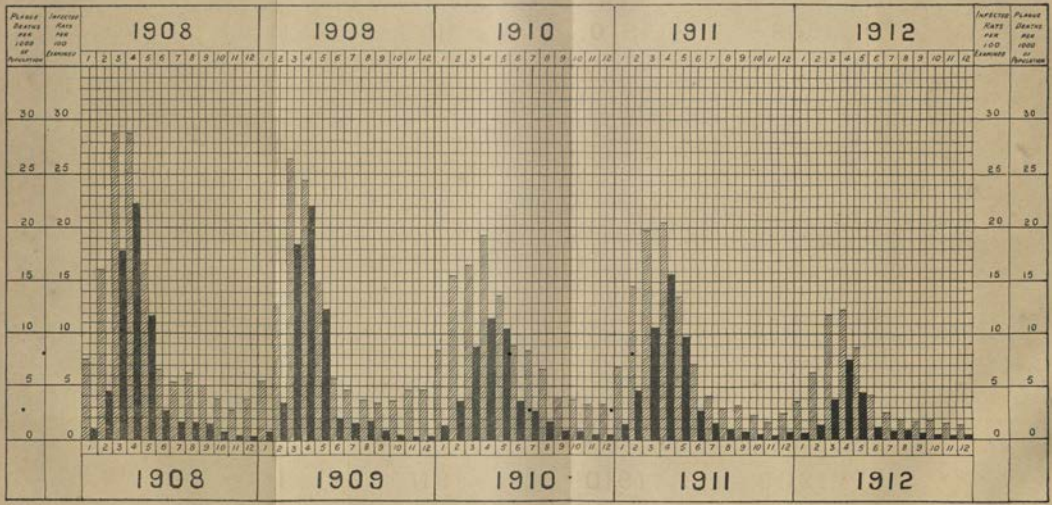
STATEMENT SHOWING THE NUMBER OF PERSONS INOCULATED DURING 1912:—

—	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total.
District 1 ...	...	1	43	2	...	...	5	...	...	...	...	...	51
„ 2 ...	...	1	223	436	74	...	...	...	...	...	...	...	734
„ 3 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ 4 ...	...	19	...	...	...	...	...	...	...	...	...	...	19
„ 5 ...	...	...	3	3	...	...	...	...	...	...	...	...	6
„ 6 ...	...	...	5	...	...	...	...	...	...	...	...	...	5
„ 7 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ 8 ...	1	...	...	...	...	...	...	...	...	...	...	...	1
„ 9 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ 10 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Parel Laboratory ...	11	24	117	115	4	3	...	...	...	1	17	45	337
H. M.'s Common Prison	469	572	467	480	548	498	547	551	426	459	360	356	5,733
Total. ...	481	617	858	1,036	626	501	552	551	426	460	377	401	6,886

DIAGRAM

Relation of RAT PLAGUE to HUMAN PLAGUE

During 1908 to 1912 (by months)



Plague Infection Among Rats.

Plague Deaths in the City

The number of rats collected and destroyed during the year was 578,082 against 582,345 in the previous year and 528,430 in 1910. (II) Rat Destruction

Of the 578,082 rats collected and sent to the Parel Laboratory, 137,840 were examined and 7,662 of these were found infected. The percentage of infected rats to the number examined further declined and was 5·5 against 8 in 1911, 9·6 in 1910, 10·4 in 1909, 12·3 in 1908 and 14·2 in 1907. Infection among Rats.

The percentage of infected rats in January was 3·5 against 6·8 in the same month of 1911, but it rose during following months, to 6·2 in February, 11·9 in March, reaching the maximum of 12·3 in April against 20·5 in the same month of 1911. The mortality from Plague followed a parallel course during these months; being 33 in January, 101 in February and 306 in March, and in April 611, which is the highest number registered in any month during 1912.

The ratio of infected rats then gradually declined in the following months to 8·7 in May, 4 in June, 2·6 in July, 1·9 in August, and 1·7 in September, then with a slight rise in October (1·8) reached the minimum of 1·5 in November. With the setting in of the cold weather it rose to 1·5 in December. Similarly, the number of deaths from Plague declined to 348 in May, 92 in June, 61 in July, 59 in August and 41 in September; the smallest number was reached in October (19); a slight rise followed in succeeding months; 21 in November and 25 in December (*vide* following Statement).

Months.	Total number of rats sent to the Parel Laboratory.	Number of rats examined.	Number of rats found infected.	Ratio of rats found infected per 100 rats examined.
January	52,486	13,425	474	3·5
February	51,443	14,523	904	6·2
March	57,772	13,459	1,613	11·9
April	54,575	15,774	1,952	12·3
May	49,810	15,436	1,351	8·7
June	33,251	8,113	326	4·0
July	38,309	9,090	239	2·6
August	37,782	7,953	156	1·9
September	40,013	6,931	119	1·7
October	44,812	9,543	180	1·8
November	54,049	11,508	180	1·5
December	63,780	12,085	168	1·5
Total	578,082	137,840	7,662	5·5

The rise and fall in the mortality from Plague will be found to depend on and follow similar variations in the infection among rats; this relation between Rat Plague and Human Plague is indicated in the Diagram facing this page. Rat Plague and Human Plague.

To induce evacuation of conjested areas, Municipal Health Camps were, as in previous years, put up at Victoria Bunder, Agripada, Purbhadevi Road, Parel Government House, Baboola Tank, Gilder Tank and Mahim Gardens and Railway Station. (III) Evacuation.

Semi-permanent Health Camps at Koliwada (Colaba), Northbrook Gardens, Arthur Road and Chinchpookli (at the junction of DeLisle Road and Arthur Road) were in addition maintained in a state of repair during monsoon months.

Besides these there were private Health Camps put up by the public at Vincent Road, Matunga and Mahim.

Every place, where an infected rat was found, or a Plague case occurred, was pesterined and all gullies and passages between houses were similarly treated. (IV) Disinfection.

The following Statement gives details of disinfection done :—

On account of	Cases removed to Hospital.	Houses Vacated.	Houses Disinfected.
Precautionary Measures	.....	78	2,242
Dead Rats	.....	46	300
Plague	191	178	1,970
Suspicious Plague	17	17	36
Small-pox	558	36	1,527
Measles	21	.....	286
Chicken-pox	7	.....	9
Typhoid Fever	59	.....	207
Malarial „	39	.....	68
Remittent „	4	.....	30
Relapsing „	.....	.....	3
Cholera	372	90	2,291
Erysipelas	6	.....	12
Leprosy	.....	.....	6
Diarrhœa	33	.....	56
Tubercle of Lungs	63	.....	87
Other Tubercular Diseases	14	.....	31
Phthisis	75	.....	1,962
Pneumonia	52	.....	11
Other Causes	157	13	60
Total ...	1,668	468	11,194

Small-pox.

Small-pox was prevalent throughout the year and epidemic for over three months from the week ended 24th February to the close of May.

It was slowly increasing during the last month of 1911—with the setting in of the cold season, as usual. December registered 30 cases and 15 deaths from the disease : none of the cases were imported.

Months.	Small-pox attacks in 1912.			Small-pox deaths in 1912.		
	Males.	Females.	Total.	Males.	Females.	Total.
January	83	38	121	37	17	54
February	164	76	240	69	45	114
March	251	145	396	145	85	230
April	205	180	385	122	131	253
May	141	104	245	88	83	171
June	55	49	104	40	44	84
July	28	24	52	26	19	45
August	7	7	14	7	8	15
September	4	3	7	2	2	4
October	5	3	8	2	2	4
November	3	.....	3	.....	.....	.....
December	5	5	10	2	3	5
Total ...	951	634	1,585	540	439	979

Small pox by Months.

The year under report opened with a single case on 3rd January ; it was a Goanese Ayah, in Mahaluxmi, who succumbed. But the disease did not attain serious proportions until accelerated by importations from outside. Till the 24th of the month, 65 cases and 35 deaths

were registered—4 of the cases being imported from Mecca (by returning pilgrims), Karachi, Delhi and the Punjab; there was also a case from the Harbour in connection with the shipping.

In the last week of the month, however, with the continued arrival of pilgrims from the Haj, the disease was considerably reinforced by cases imported by them, and we had 49 attacks and 19 deaths. Of the 49 cases, 13 were Mahomedan Pilgrims from Mecca, of whom 3 died.

January thus closed with 121 cases and 54 deaths; 14 of the 18 imported cases occurred among returning pilgrims, of whom 11 appear to have recovered.

February and March were marked by increasing prevalence: 240 attacks and 114 deaths were registered in the former month and 396 attacks and 230 deaths in the latter. 30 of the cases in February were imported, 21 being among Hajis, of whom 5 appear to have died. Importations of the disease decreased in March, there being only 5 cases: 1 among Mahomedan Pilgrims, which proved fatal, and 4 among other new arrivals.

In April, the disease reached its height and registered 385 attacks and 253 deaths. There were 6 imported cases but not among the Hajis.

Thereafter the disease began rapidly to decline: 245 cases and 171 deaths were registered in May; of the cases 6 were imported but none by the Hajis. Importations may now be said to have practically ceased, for during the rest of the year there were only 7 such cases, 4 of them being in December.

June recorded 104 cases and 84 deaths and July 52 cases and 45 deaths.

The history of the disease during the rest of the year is soon told: as there occurred only 42 attacks and 28 deaths from July to December.

To sum up, of the 1,585 Small-pox attacks during the year, 72 were imported, 7 of these being in connection with the harbour and shipping and 32 among Mahomedan Pilgrims from the Haj and 28 among other new arrivals. Out of the total 979 deaths from the disease, 34 were among persons newly arrived into the City, 10 of them being among Hajis.

Small-pox cases among Hajis.

33 cases of Small-pox were detected among Mahomedan Pilgrims from the Hedjaz on arrival in Bombay and 32 of these were treated at the Arthur Road Hospital: 11 in January, 19 in February, 1 in March and the last in July.

Their vaccinal condition.

Of these 7 were not vaccinated at all, 8 vaccinated in infancy and the remaining 17 were vaccinated here in the previous year (1911).

The Health Officer of the Port, in reporting to Government on the effect, on the health of returning Pilgrims, of vaccination performed in Bombay prior to their embarkation, remarked that there was no doubt that it had "done good by (*a*) reducing the number of cases of Small-pox among returning pilgrims, and (*b*) thereby lessening the number of centres of infection after the pilgrims landed in India"; and pointed out that "it is advisable that the greatest care should be taken in the performance of the operation so as to prevent, as far as possible, the inflamed arms which one comes across."

Vaccinated Pilgrims and "inflamed arms."

Attention being drawn by Government (Resolution No. 8557, dated 13th December 1912), to the latter observation—enquiries were made and it was found that there was nothing wrong or deficient in the way in which the operation was performed. The Superintendent of Vaccination reported that the emulsions used for the vaccination of the pilgrims for the Haj were the same as those used for the vaccination of infants and children in the City. A genuine case of inflamed arm was rarely found among the primary vaccinations in the City—a large number of which were seen a week after the operation. A certain amount of inflammation was always present, as the result of successful vaccination, and was slightly painful and inconvenient. To avoid this some of the Hajis had been observed by the Vaccinators to press out the vesicles or apply ashes or irritants to dry them earlier, thus rendering the inflammation somewhat more marked. The Protector of Pilgrims was therefore requested to instruct the pilgrims to leave the vaccinated arms in future as much alone as possible and to bring to the notice of our Vaccinating Officer any cases of inflamed arms that might be detected.

Small-pox by Sections.

The highest number of deaths from Small-pox was registered in Byculla (183), giving the death-rate of 2·42 per 1,000 of population in that Section; next in the order of incidence may be mentioned Worli (151) 1·68; Parel (94) 2·06; Mazagaon (68) 2·26; Tarwadi (44) 1·54; Kamathipura (46) 1·25; Mahim (33) 1·08; Kumbharwada (27) ·97; Sion (26) ·84; Dhobi Talao (26) ·62; Fanaswadi (25) ·91, Girgaum (25) ·81. Only Upper Colaba registered no death from the disease.

Small-pox by Sex and Age.

Out of 979 deaths from Small-pox during the year, 540 were in the male and 439 in the female population.

274 of the deaths occurred among infants, or children under twelve months, being 28 per cent. of the total Small-pox mortality. Of these 125 were males and 149 females. 511 of the total deaths from the disease were registered among children up to 5 years of age, being over 52 per cent. of the total; 241 were males and 270 females.

Up to 25 years of age, 867 deaths were registered from this cause; being over 88·5 per cent. of the total Small-pox mortality.

Vaccinal Condition of Infants who died of Small-pox.

Of the infants who died of Small-pox during the year, 201 were not vaccinated at all; in 47 cases the vaccinal condition could not be ascertained; of the remaining 26, 18 were reported to have been vaccinated outside Bombay; if so, the operation may not have been successful. 3 were vaccinated in Bombay, but the operation was not satisfactory and the parents had been advised to get the children re-vaccinated after a time; 5 were vaccinated during the incubation period of Small-pox.

Vaccinal condition of children admitted into Hospital for Small-pox.

The information required by Government Resolution No. 3231 of 21st May 1912, General Department, as to the vaccinal condition of children (under ten years) who were admitted for and died of Small-pox during the year in the Arthur Road Hospital is subjoined :—

AGE.	VACCINATED.				UN-VACCINATED.			
	Admitted.	Discharged.	Died.	Case rate.	Admitted.	Discharged.	Died.	Case-rate.
1 to 6 months	2	2	...	.....	13	6	7	53·84
7 to 12 months	1	...	1	100·00	9	4	5	55·55
1 to 5 years	24	18	6	25·00	36	28	8	22·22
6 to 10 years	26	23	3	11·53	13	9	4	30·76
Total ...	53	43	10	18·86	71	47	24	33·8

Vaccination.

The work of vaccination is a routine duty of this Department. There are 15 Public Vaccination Stations in the City, of which 3 are worked on every Monday morning and two every morning during the rest of the week; while that at Kalbadevi Road is open every Sunday, morning and evening.

But during the cold season special and strenuous efforts are made to push on vaccination. As usual, leaflets of precautions against Small-pox were distributed freely in the City and the Registrars and the Vaccination Staff paid visits to houses and chawls and affected localities to induce and vaccinate and re-vaccinate in large numbers. The public were warned also through the Press to take advantage of the facilities offered for vaccination.

Abstract of Yearly Return of Vaccination (excluding Bandra and Kurla), from the Superintendent of Vaccination, for the Year 1912.

| | PRIMARY VACCINE OPERATIONS. | | |

Vaccination of Pilgrims to the Hajj.

In my Annual Report for 1910, I observed, with regard to the vaccination of Pilgrims proceeding to the Hedjaz, that a considerable number of them did not, either from ignorance or prejudice, allow the operation to take effect, as they were found to have turned down their sleeves or washed their arms under the water tap before the lymph had time to dry in; this was a regrettable feature, inasmuch as individual supervision of thousands of pilgrims in crowded camps and Musafarkhanas was out of the question and the general instructions issued did not appear to have been heeded in such cases.

Some Small-pox cases having occurred on the return voyage among pilgrims, who had been vaccinated prior to their departure in Bombay, enquiries were made as to the probable cause of the occurrence, and the Superintendent of Vaccination, who visited these cases under treatment in the Arthur Road Hospital (in February), reported that they were of the mildest type—in some cases with only a few pocks; that the occurrence of the cases was to be attributed to the fact that the re-vaccinations carried out in 1911 at the Musafarkhanas "were not quite satisfactory": as "the rush for vaccinations on the day fixed was always very great and every vaccinated person was immediately lost sight of as soon as he was vaccinated."

To prevent the rush and ensure adequate supervision of vaccinated pilgrims while the lymph dried in, I suggested to the Commissioner of Police, who is the President of the Haj Committee, the desirability of opening daily Vaccination Stations which this Department was prepared to do—so that the vaccination work could be spread over a longer time. This suggestion was approved by Mr. Edwardes and passed on to Government, who were pleased to accept it (*vide* Resolution, General Department, No. 5074/2nd August, 1912). To meet the convenience of Pilgrims, vaccination was to be performed twice every day, once in the morning 8 to 10 at one place and at another from 4 to 6 p. m., the Protector of Pilgrims, who was acquainted with the daily number ready to undergo vaccination, being charged with the duty of informing the Vaccination Department as to the place where the vaccination should be performed from day to day.

This was the procedure adopted during the Haj Season of 1912. As in previous years, a small special staff was engaged for the purpose and in addition to the two specially trained District Nurses, a Lady Vaccinator was employed to vaccinate the female pilgrims.

The out-growing pilgrim season commenced about the beginning of May and closed in October 1912; but there were some pilgrims who proceeded earlier in the year—in January and February. The total number who proceeded from this port for the Haj during the year was 16,024, of whom 10,587 were vaccinated in Bombay: 59 males and 47 females primarily and 8,531 males and 1,950 females re-vaccinated. Of the others, a majority are believed to have been vaccinated in other provinces before starting on the pilgrimage.

Opening of Port of Karachi for Pilgrims.

The number of pilgrims who embarked at this port for Jeddah was much smaller than in previous years, owing to the diversion of a considerable portion of the heavy pilgrim traffic from Bombay to Karachi by opening the latter port for the embarkation of pilgrims in the last season which commenced in August, 1912. "This measure will not only promote the convenience of pilgrims from Northern India and Afghanistan but will appreciably relieve the present congestion of traffic in Bombay, thus tending to the improvement of its general conditions" (*vide* Government Resolution, General Department, No. 2670, dated 26th April 1912).

Fevers.

The fevers included under this general name are Scarlet, Enteric, Malaria, Ague and Remittent and Relapsing fevers. The total number of deaths from all these types of fevers was 3,585 being 439 more than in 1911, 366 more than the mean of the preceding quinquennium (1907-1912) and 180 more than the last decennial average (1902-1911).

Cases of Scarlet fever rarely occur in Bombay but during the year 1 death from this cause was reported from the Station Hospital, Colaba, to have occurred on 10th August, the victim being a soldier, twenty years of age.

152 deaths were ascribed to Enteric, being 7 more than in 1911 and 28 more than the last five-year average (1907-1911). 360 deaths were due to Malarial fever against 334 in 1911 and 280 the average of the preceding quinquennium.

Ague and Remittent fever caused 3,070 deaths, exceeding those for 1911 by 413 and the average of the antecedent five years by 417. Only 2 deaths were put down to Relapsing fever, being 8 less than in the preceding year, and 160 less than the quinquennial mean.

The subjoined Statement gives the monthly variations of mortality in 1912—from all kinds of fevers in general, as also from Malarial fever in particular. The maximum mortality was registered in October from Malarial (49) as well as from all fevers; and the minimum in September under the former (17) and in July under the latter cause (256).

TABLE SHOWING THE NUMBER OF DEATHS FROM ALL FEVERS AND MALARIA BY MONTHS FOR 1912.

MONTHS.	Number of deaths from all Fevers.	Number of deaths from Malarial Fever.
January	316	26
February	277	18
March	315	38
April	277	22
May	270	26
June	258	28
July	256	24
August	313	29
September	309	17
October	349	49
November	320	47
December	325	36
Total	3,585	360

The annual movements of Fever Mortality from 1902 to 1912 are indicated by the following Table of figures:—

Year.	No. of deaths.
1902	5,169
1903	2,500
1904	2,530
1905	2,878
1906	4,882
1907	3,633
1908	3,403
1909	2,800
1910	3,113
1911	3,146
Average (1902-1911)	3,405
1912	**3,585**
More or less	+180

Anti-Malarial Operations.

In accordance with the recommendation made by Dr. C. A. Bentley—the Officer appointed by Government to investigate into the causes and suggest measures for the control and prevention of Malaria in Bombay, a special Malaria Department was organised during the year under review from the middle of April, 1912. A staff of four Inspectors, 38 Sub-Inspectors and 82 begaries with a separate clerical establishment was organised and placed in charge of Senior Deputy Health Officer, Dr. K. B. Shroff, who was appointed Special Assistant to the Health Officer for Malaria under my supervision.

Vigorous measures were adopted towards the closing or filling up of infected and insanitary wells, as a result of which 82 wells were entirely filled in and 472 covered hermetically with wood, concrete, etc., or provided with mosquito-proof wire gauze covers. Out of these, in 491 cases the parties carried out our requirements without resort to legal measures. In addition to the measures in this direction, special care was taken to gauge the incidence of Malaria by taking spleen census and parasite index. All the laboratory work in connection with the problem of Malaria which was, prior to the establishment of a special Malaria Department, done in the Municipal Laboratory, was now done in the Malaria Department under the supervision of the Chief Malaria Officer, and a small Laboratory with microscopes was set apart for his work in a hired building close to this office. In addition to this, efforts were made to educate the public in the cause and prevalence of Malaria by giving lectures and demonstrations and 14 such lectures were given by the Malaria Department at various places. A report on the work done by this Special Department will be issued in April after the expiry of one year and full details of the work done will be shown therein. The following Statement gives a summary of the work done during the year by the Special Department:—

No. of wells filled in	82

No. of wells hermetically covered—		
(*a*) with wire gauze	29	
(*b*) with concrete	63	
(*c*) with wood	50	472
(*d*) covered, leaving trap door	304	
(*e*) with trap door and pump	26	
No. of wells covered or filled in without resorting to legal measures ...		491
Do. do. after resorting to legal measures ...		63
No. of wells reported to the Standing Committee		250
No. of cases in which sanction of the Standing Committee was received		214
No. of prosecutions instituted under Section 381 of the Act		85
No. of houses inspected by the Inspectors including repetitions ...		8,955
No. of houses inspected by the Sub-Inspectors		147,028
No. of houses in which Anopheles were found		4,832
(*a*) in wells	4,321	
(*b*) in tanks, etc.	511	
No. of houses in which Culex were found		2,424
(*a*) in wells	2,012	
(*b*) in tanks, etc.	412	
No. of letters written to hermetically cover cisterns		535
No. of cisterns hermetically covered		957
No. of wells wherein fish were recommended		406
No. of wells in which fish were successful		155

Cholera.

Never absent from Bombay.

Although Cholera cannot be called endemic in Bombay in the true sense of the word, we shall look in vain for its complete absence from the City any year. It is never wholly absent for more than two months at a time; in a long survey from 1850-1912, we find its continuous absence for three months only in 1897, and yet this was a year of epidemic incidence.

Risk of outside infection.

Thus, though cases of Cholera occur yearly in the City, it has frequently needed importation from outside to cause an epidemic. The adjoining Districts of Thana and Poona, as also those of Nasik and Pandharpur afford, owing to increase in railway communications, very great facilities for the continual introduction of the disease into Bombay. With these facilities, the risks of infection have largely increased. The constantly recurring Fairs at Nasik and Pandharpur, which attract large crowds of people even from remote parts, are often a signal for the serious introduction of infection into Bombay, as on dispersal they visit and pass through this City and serve as foci for the spread of infection. Again, being the metropolis where large works are almost always in progress, Bombay attracts large numbers in search of food and employment, and this is especially so in times of draught and famine in the Mofussil. Our City thus lies exposed to many risks. I pointed out in my Annual Report for 1906, that "the most notable feature of Bombay epidemics is that the out-break of any of them is generally synchronous with the prevalence of the same in the Districts outside, and that its severity and spread are much influenced by the unrestricted arrival of sick passengers allowed to travel by railway."

Previous Epidemics 1850-1912.

If we take a historical survey of Bombay from 1850 onwards, we find that the City was visited with almost annual epidemics of Cholera, seldom approached in their severity by any of the more recent epidemics. The annual average mortality from the disease during the ten years from 1850-1859 was 2,243.

These visitations became less frequent after 1865, the year in which the Public Health Department of the City was established. The annual average of Cholera mortality during the preceding quinquennium (1860-1864) was 2,565 deaths, while that for the following (1865-1869) was 862.

From 1880 to 1896, the disease was epidemic in the City only twice; for about a month in the third quarter of 1883 and for about three weeks in the same quarter of 1894; and the total mortality during the years from this cause was 1,027 and 426 respectively. The mean annual mortality for the decennium 1870-1879 was 624 and for that from 1880-1889, it was 410.

In 1897, the incidence of Cholera was very severe in the third quarter, when it was epidemic and registered 1,265 deaths in the year. The next epidemic occurred in 1900 and was of such magnitude that the mortality caused thereby (4,273) was, differences in population

aside, next only to that in 1851 (5,485) and 1864 (4,847). The epidemic stage lasted from the fourth week of May to the second week of October. The average annual Cholera mortality of the preceding decennium (1890-1899) was 306.

Then followed a respite of five years and in 1906 the City was again afflicted with epidemic Cholera (but less severe than in 1897) from the second week of April to the end of May, and as a result of recrudescence, again from the second week of June to the end of August.

The epidemic of 1907 was both briefer in duration and milder in incidence : from the fourth week of July to the end of September, and the mortality from the disease during the entire year was 439. The mean annual mortality from Cholera during the ten years (1902-1911) was 307, while during the decennium prior to that period (1892-1901) it was 725.

The next epidemic occurred in the year under review.

It will be seen that each of the epidemics succeeded a year of scarcity of rainfall and famine, when Cholera prevailed in all the surrounding Districts of the Presidency.

Year.	Rainfall in Bombay.	Year of epidemic in Bombay.
1896.	87·6	1897.
1899.	35·9	1900.
1905.	33·6	1906.
1911.	45	1912.

Though the year 1896 was not marked by scarcity of rain in Bombay City, it was one of famine in the country around, which induced, even in the year following, an enormous influx into the City of the poor and destitute, many of whom "struggled here by road from a famine area as far off as Central India."

Cholera in Bombay, Calcutta and British India compared.

In the following Statement is compared the mortality from Cholera, during 1901-1910 in the City of Bombay and of Calcutta and in British India; the death-rates per 1,000 of population are inserted. From a study of the figures it will be observed that the mortality from the disease is much lighter in Bombay than in Calcutta or British India.

YEAR.	BOMBAY.		CALCUTTA.		BRITISH INDIA.	
	No. of Deaths from Cholera.	Death-rate.	No. of Deaths from Cholera.	Death-rate.	No. of Deaths from Cholera.	Death-rate.
1901	198	·25	1,720	2·02	271,210	1·21
1902	75	·09	2,716	3·20	224,136	0·99
1903	17	·02	1,990	2·34	312,854	1·38
1904	219	·28	2,056	2·42	192,835	0·85
1905	26	·03	2,323	2·74	441,786	1·96
1906	1,241	1·26	2,504	2·95	690,519	3·05
1907	439	·44	3,803	4·48	408,102	1·81
1908	95	·09	3,694	4,35	591,725	2·61
1909	727	·74	2,022	2·38	239,429	1·06
1910	107	·10	1,901	2·24	430,451	1·90
Total (1901-1910) ...	3,144	.....	24,729	.....	3,803,047	.....
Annual Average	314	·35	2,472	2·91	380,304	1·67

Cholera in 1912.

In 1912 Cholera began with a single case on the New Year's day, but increased so rapidly that on 9th January 17 attacks were registered. The disease began to spread and the outbreak threatened to be severe : in the week ending 13th January, 66 attacks and 44 deaths were recorded and the disease declared epidemic. Two of the deaths that occurred till then from Cholera were among recent arrivals from Goa.

January (Epidemic).

Measures for control.

The public were immediately warned through the Press to take timely precautions and advised (1) not to use well water for cooking and drinking purposes, (2) to boil milk, (3) to boil and filter tap water for drinking, (4) to protect food from flies, (5) to avoid over-ripe fruit, (6) to have latrines and urinals thoroughly flushed and disinfected, and (7) report all cases immediately to this Department.

The Deputy Health Officers and Registrars were requested to (1) enquire into and take action in any suspicious case, paying particular attention to the disinfection of latrines, urinals, utensils, bathing-places, wells and tanks; (2) send for analysis samples of water from any house or chawl where Cholera cases occurred; (3) treat all wells with Permanganate; (4) see to the immediate removal of suspicious cases and vacating of houses and disinfection of rooms.

Soiled linen in contact with patients was disinfected with Phenyle and cooking and eating utensils washed in weak Izal.

Private and Municipal Markets were visited almost daily and thoroughly washed and disinfected, especially the fish-stalls. Systematic inspection of food, especially fish, was carried out and damaged and stale fish destroyed.

The effect of all these measures was that Cholera shrank to the sporadic stage in the following week (ending 20th January); and gradually disappeared. While 107 cases and 75 deaths occurred in the first 15 days of January, 23 cases and 23 deaths were recorded in the rest of the month. February registered only 7 cases, all of which proved fatal; one of the cases was imported from Alibag, as one in January was from Poona. From the 23rd of February till the 14th of March, the City was absolutely free from Cholera; thereafter till the end of the latter month, 5 cases occurred (2 of which were imported from Narayengao) and 3 deaths.

February & March.

April.

In April 29 cases and 24 deaths were registered: of the cases 8 were imported; 2 from Nasik, and 1 each from Khandwa, Jejuri, Rameshwar, Dakore, Poona and Thana.

Cholera was prevalent in some of the mofussil districts in April and in that of Nasik it was worst in the week ended the 14th. In Poona Cholera began towards the end of March and rapidly spread in April. It was prevalent also in Thana from the third week of that month.

May (Epidemic).

In May 155 cases and 123 deaths were registered; the disease, having become epidemic in the 3rd week of the month, declined to the sporadic stage in the first week of June.

During this period, Cholera was very bad in Poona, and at its height in Satara and on the increase in Surat and Thana Districts: and each of these Districts imported cases into Bombay.

Imported cases.

Altogether 12 cases were imported during the month, 3 from Surat, 2 each from Lonavla and Bhyndar (Thana), and 1 each from Wai (Satara), Wathar, Nasik, Umbergao (Thana) and 1 case was reported from the Harbour.

June (Epidemic).

Height of the Epidemic.

During the first ten days of June a daily average of 3 attacks and 3 deaths was recorded. But on the 11th, the disease took a sudden leap forward and increased in virulence till the 15th and registered 503 attacks and 414 deaths during the five days. The severity of the outbreak was in special evidence in the Mahomedan quarters of B Ward, Mandvi and Umarkhadi, though some of the Sections of the City came latterly to be affected.

Dr. Godinho's observations.

Dr. L. G. Godinho, M.D., D.P.H., Deputy Health Officer of the Ward, reporting on the severe outbreak in June, observed:—Amongst Mahomedans the Sunnis suffered most severely and more males among these died of Cholera than females. It was notified to the Mahomedan public (Sunni) that the Pir of Baghdad, a direct descendant of the Holy Prophet, was to visit the Mahomedan localities on the evening of the 10th June. The different Sunni Jamats were busy on the 9th and 10th decorating the streets and a large concourse of Mahomedan Sunnis began gathering early in the afternoon of the 10th, and it was then realised that the people needed water to quench their thirst on this very hot day. Between 10-30 a.m. and 5 p. m. there was no water in the service pipe. Bhisties were therefore hastily engaged and filled up the *ghurrahs* which were placed on the *verandahs* of Mahomedan houses for public supply. Large copper cauldrons were also impressed into service, filled with a kind of "Kutcha Sherbet," a mixture of Mauritius sugar and unboiled water. The water employed for this purpose as also for filling the *ghurrahs* was from places which the Bhisti found handiest; well, Musjid reservoir and stored Municipal fountain water was promiscuously used. It can, therefore, be easily imagined how with Cholera infection in the locality this water could easily be infected and prove a common source of infection. Many people, to satisfy their hunger, availed themselves of the cheap native sweets hawked about in Mahomedan Streets. Swarms of flies are observed to alight on these sweets and regale themselves. The fly is a notorious propagator of disease, it revels in the common housegullies, about the privies, chokes, and dirty washing-places where in all probability exist matters which a Cholera patient discharges from the stomach and bowels—matters most virulently infective as they contain Cholera Vibrios.

Probable causes of out-break.

Customs and ceremonies favouring spread of infection.

The water in Sunni Mahomedan Mosques may have easily become contaminated. If a death occurs during hours of non-supply of water, then, as it is incumbent on the deceased's family to remove the dead body in as short a time as possible, generally within three hours, there is no alternative but to seek water for washing the dead from Mosque reservoirs; vessels probably infected from the deceased's room are brought to the Musjid and dipped into the reservoir. The males suffered more than females and prior to them. The infection was carried home by the male from outside and by natural domestic relations, the disease spread to the females of the household. The female in the Mahomedan household besides being the cook is the nurse. When a death occurs, both male and female relatives repair to the house to attend funeral ceremonies and be present at the reading of the Koran. Those very closely related remain at the place for a day—even two or three—and they, especially the females, squat on the floor which is probably infected and thus acquire infection. The soiled clothes and fomites containing infected matter are either collected in the *nahani* of the room and washed there or taken to the general washing place which generally adjoins the privy. The water supply of the house is kept in utensils on the walls of the *nahani* of the rooms and the water for use generally obtained from the tap at the general washing place. It will be seen at once how easily the water may be contaminated by infected matters.

The Khoja community, comparatively small but well-to-do, suffered next in degree to the Sunni community; in their case also the infection apparently was conveyed into the house by the males, whose avocations are mostly outdoor and who have direct intercourse with the Sunnis in their business, trades, etc.; their families also mix freely with those of the Sunnis, in fact, live in same chawls as direct neighbours.

Borahs, being Mahomedan Shias by religion, perform the funeral ablutions of the dead before burial in the Musjid in a room set apart for the purpose. The water used for this purpose being from the Musjid reservoir, the risk of contamination of the water in the reservoir and the drinking water stored in *ghurrahs* is almost positive, for the people engaged in the ablutions of the dead bodies wash their hands and feet from the water of the reservoir; they are moreover not over careful in using the common drinking tinpot which is used to drink water from the *ghurrahs*.

Thus the main channel of infection in the period during which the epidemic attained its zenith, *i.e.*, 11th to the 19th, was the tainted water, *sherbet*, and sweets availed of by the people on the evening and night of the 10th, when the Pir Saheb made his peregrinations in the Mahomedan Mohollas. That it was not the only channel is explained by the fact that females, who did not partake in the rejoicings, suffered after the infection was introduced into their houses.

Hindus, compared with Mahomedans, suffered less; and among Hindus, the poorer labouring classes (Marathas) suffered more, because those affected lived in close proximity to Mahomedan infected quarters, in back to back houses with theirs and many of them worked in Chukla and Jackeria Musjid Streets in Mahomedan warehouses, godowns, etc. How far occupation or domestic intercourse with the infected localities was the cause cannot be definitely ascertained. Personal contact with the sick among Hindus may have a great deal to do with the spread of the disease, as they are careless while nursing the sick and invariably collect and wash infected clothing, etc., in the general washing place and thus infect themselves and their neighbours.

From the 16th June the epidemic gradually abated, and in the latter half of the month 695 attacks and 513 deaths from Cholera were registered in the City: of these 368 attacks and 266 deaths were registered in B Ward.

In all 1,239 cases of Cholera were registered in June in the City; of these 961 died. And though subsequently the disease spread to almost every other Section of the City which had escaped infection before (except Upper Colaba), nowhere did it prevail to any serious extent.

Cholera among Europeans.

During January to June 10 cases of Cholera occurred among Europeans, 1 in January, 1 in February, 3 in May and 5 in June; of which 4 recovered. The St. George's Hospital authorities having unexpectedly refused to admit Cholera cases into the Hospital for treatment, arrangements were hurriedly made at the Arthur Road Hospital to treat and nurse them as well as could be done.

Imported cases.

During the month 26 cases of Cholera were imported into the City; 8 from Poona where Cholera was increasing rapidly; 5 from Thana, 2 from Sholapur; Satara, Ahmednagar and Ratnagiri Districts and Agra and Jamnagar each imported 1 case; while 6 cases occurred in connection with the harbour and shipping.

Measures for control.

As Cholera rose in June, precautions were given to the public by publication in the local English and Vernacular papers, and by beating *battaki* in different parts. Extra medical aid was provided day and night at the Municipal Dispensaries in B Ward which contained the principal affected localities.

A special staff of four senior Inspectors was placed on Cholera duty to supervise the special cleansing arrangements that were made. Extra medical men were also placed on duty and made house to house visits and directed the attention of the people to milk and food and water supply and took special care about disinfection of rooms, clothes, bedding, utensils and of Bhisti's *mushak*; they got rid of all *ghurrahs* on the streets and *verandahs* and with Police help forbade the washing of clothes at public standpipes.

Every public standpipe, every public bathing place was disinfected daily with Izal and gullies and privies and latrines were pesterined.

All unwholesome food, fish, meat, fruit, etc., was seized and destroyed.

Medical men placed on special duty called at private and charitable dispensaries to obtain information about Cholera cases; those which were not properly cared for in the house or not under qualified medical attendance were removed to Arthur Road Hospital. Every endeavour was made to persuade people to consent to such removal where cases occurred in rooms overcrowded, or occupied by large families; failing this, a notice under Section 424 (1) of the City of Bombay Municipal Act was issued and removal of the case secured. All contacts and suspects were daily visited, medical treatment where necessary given, and evacuation secured and disinfection applied.

Immediately after the removal of a suffering case, or in case of death among Hindus, after the removal of the corpse, the room in which it occurred was disinfected with a solution of Perchloride of Mercury; the privies, *nahanis*, *morhis*, washing places and passages were treated with a solution of Izal fluid and Izal powder freely sprinkled about these places; but if a death from Cholera occurred among Mahomedans, these measures had to be kept in abeyance for three days until after the completion of the *zyarut* or after-death ceremonies. This delay, inevitable under the circumstances, was a great handicap to us.

All taps, copper and other utensils in the room were washed in a solution of Permanganate of Potash.

All infected clothing and bedding was soaked in a solution of Perchloride of Mercury and subsequently sterilized at the Sterilizing Station. If a case occurred in a high building, all the *kutchra* which lay about on the floor on which the case occurred, was removed and the passages treated with Izal powder. The house gullies in infected localities were flushed with Izal fluid and subsequently pesterined.

When cases occurred in an insanitary or overcrowded chawl, the whole chawl was vacated and inmates sent to camp; all privies on the different floors in that chawl were treated with Izal fluid and Izal powder. All tanks, reservoirs, and wells in premises in which Cholera cases occurred were treated with a solution of Permanganate of Potash and the suspected water was sent to the Municipal Laboratory for chemical and bacteriological examination.

When Bhisties came under suspicion of being possibly the "Carriers" of Cholera infection, their *mushaks* were called in, treated with a solution of Permanganate of Potash and returned.

Municipal Commissioner's Report to the Corporation.

On the 14th of June, the Municipal Commissioner made the following statement to the Corporation:—

"There is no reason to believe that the recent increase in the number of cases of Cholera is in any way due to the Municipal water-supply. The water-supply has been constantly analysed both at the Reservoirs and at water taps, and no trace of the presence of the Cholera germ has been found. It has been suggested that the lowness of the supply in the Vehar Lake is responsible for the outbreak. This cannot be the case, because not only have the analyses of Vehar water been favourable but those places which receive their water direct from Vehar have not suffered from Cholera. Thus the Indian Infantry Regiment at Santa Cruz gets its supply direct from Vehar, and has not suffered from Cholera. Portions of the north of the Island also get their water direct from the Vehar pipe before it reaches the Reservoirs, and there have been none but very rare and sporadic cases of Cholera in those parts. On the other hand, the parts of the town which have been severely affected by Cholera receive their supplies from the Reservoirs, in which water other than Vehar predominates. There is no ground, therefore, for believing that the Vehar water has anything to do with the outbreak.

"The causes of the outbreak are much more likely to be the following:—

"There have been occasional cases for some weeks in the City, and there have been outbreaks in various other places, such as Nasik and Khandala. The infection which was doubtless present in the City has had opportunities of spreading, owing to the large quantities of food, particularly of fish and fruit, which have been recently sold in a rotten or dangerous condition. The extreme heat has also caused a larger consumption of cooling drinks and sweatmeats which are sold in the streets and which are often prepared in dirty vessels and surroundings. Much more water has moreover probably been drunk in the streets from the *ghurras* placed in *verandahs*. These *ghurras* are often in a dirty and greasy condition and they are liable to be polluted by dirty hands or vessels put into them.

"The outbreak has been most marked in the Mahomedan quarters of Mandvi and Umerkhadi. It may be noticed that the sudden rise in the number of Cholera cases occurred immediately after the procession of the Pir Saheb of Baghdad, through these quarters, when there were many thousands of persons in the streets for several hours, and when there was probably a very large consumption of food and drink sold in the street. At any time, however, there are a great number of hawkers in these quarters, and a large number of people get their food practically in the streets. *Ghurras* of water were placed in many *verandahs* from which passers-by were allowed to help themselves. These causes have been aided by a delay in reporting cases which undoubtedly existed.

"The following measures have been taken in addition to the disinfection which is invariably applied when a case is reported:—

"A motor car has been engaged for the rapid removal of cases to hospital. All *ghurras* of water have been removed from *verandahs*.

"The Superintendent of Markets has been directed to go round the Private Markets twice daily. The Municipal Markets are already carefully supervised.

"A special staff is being put on to inspect all fruit godowns and to examine hawkers' goods in the streets.

"In order, however, to check the spread of the disease, it is most necessary that the inhabitants of the City should observe the following precautions:—

"A medical man should be at once called in for any suspicious illness and any case or death which is attended with any Choleric symptoms should be at once reported to the Ward Health Office.

"This will ensure immediate disinfection and prevent other inmates of the house being attacked.

"Water should be taken only from the water taps, and should, as an extra measure of precaution, be boiled. All meat and fish should be cooked within an hour after being brought into the house. Great care should be taken to examine fish when purchasing, especially bummelow and black pomfret which decompose most rapidly. Fruit should be eaten sparingly and only when in a sound condition. Neither food nor preparations containing liquid should be bought in the streets and especial care should be taken to see that children do not do so."

On the 17th a meeting of leading Mahomedans was called at the Head Municipal Offices, with a view to enlist their co-operation and help in preventing the spread of Cholera. They were requested (i) to prevent the water in Musjid tank and vessels from being contaminated by persons who may have been in contact with Cholera cases and dead bodies; (ii) not to allow persons to wash in the tanks; (iii) not to allow Bhistis to take water from the tanks for the purpose of filling drinking vessels or supplying houses; (iv) not to allow dead bodies to be washed in the Musjid; (v) to prohibit people bringing vessels from houses where Cholera cases had occurred and washing them and their hands and mouths in the tanks at the Musjid; (vi) to have the tanks emptied frequently and cleaned and all *ghurras* emptied and cleaned and disinfected with Permanganate of Potash; (vii) to avoid over-ripe fruit and stale fish and meat and sweetmeat; (viii) to report to the Health Department all cases of Diarrhœa and Cholera and call in medical aid; (ix) to see that all evacuations from such cases were disinfected and all clothes and bedding soaked with Perchloride of Mercury or Izal fluid.

I interviewed many of the Trustees of various Mosques and they agreed to empty the tanks and clean them and letters were addressed to the Trustees of other Mosques requesting them to do the same.

At the same time Deputy Health Officers made systematic inspection of eating houses and bake-houses and sodawater factories and milk shops so as to remove to hospital any suffering cases found there.

After the 15th of June a sudden and considerable drop occurred in the incidence of the disease; and the number of attacks and deaths declined from 114 and 81 on that date to 88 and 59 respectively on the 16th. Cholera now continued steadily to decline to the end of the month.

The control of Cholera entirely depends on the rapidity with which sanitary measures can be taken before or on the first appearance of the disease, the facilities given and the co-operation of the people to accept those measures and the sanitary condition of the houses external and internal.

Even with a pure and protected supply of drinking water, it is hopeless to expect complete and immediate extermination of the disease, while the insanitary conditions surrounding the houses of the poor are allowed to remain as they are.

In many of the localities, in which the disease occurred, the same insanitary conditions exist as were present in 1903; when I represented that these areas should be condemned and a representation was made to that effect to the Improvement Trust.

Umarkhadi, Dongri, Mandvi and Nowrojee Hill were all represented as unhealthy areas, but the insanitary conditions still remain.

The outbreak was practically over about 24th June.

If any success can be claimed for the measures adopted, it was due to the work done by the Deputy Health Officer, Dr. Godinho, and the Medical and Inspectorial staff of B Ward and C Ward.

Etiology of Cholera.

Cholera is now almost universally accepted as being due to a living contagium—Koch's Cholera bacillus which, growing in the intestines of the patient, causes death partly by the effect of the toxins produced by it and partly by the profuse purging which it sets up. The further etiology of the disease resolves itself into two factors: first, the means by which the microbe gains access to the body; second, the conditions which render the body susceptible to the microbe. Of the first of these we know much, of the second little.

It is certain that Cholera is not contagious in the ordinary sense of the word as Small-pox, Scarlet Fever, Measles. Although nurses and those who attend to the sick are often affected in larger proportion than others, this is readily explained by the fact that, unless constant care is exercised in regard to cleanliness of hands and utensils, they are much more exposed than are others to the known and recognised mode of infection, which is by the mouth. All evidence goes to show that the infection of Cholera to take effect must be swallowed.

Now, as in all Zymotic diseases, the *materies morbi*–the *contagium vivum*—greatly increases within the body of the patient during the progress of his malady. During the disease a minute amount of infectious material grows into an amount capable of giving the infection to thousands; and, in the case of Cholera, this infectious material finds its exit from the patient's body in the discharges caused by the disease.

The study of the etiology of Cholera, then, is to a large extent a study of the steps by which matter, that has left one patient, so gains access to some article of food as to be swallowed by some one else.

It is conceivable that, in the presence of a great abundance of the infection, it might be inhaled in the form of dust. Of this, however, there is no evidence.

It is with food and drink that it commonly gains access to the human body. Well-authenticated instances are related, in which flies have appeared to carry the infection from Cholera dejecta to milk and various articles of diet; and Haffkine has detected Cholera bacilli in specimens of sterilized milk exposed in new vessels, to which flies were permitted free access during an attack of Cholera. The use of Cholera-infected water for washing cooking utensils and articles used in the preparation of food is another mode of local distribution; especially, in regard to the spread of the disease by milk. In the case of nurses and those who attend to the sick, or have charge of the dead, the Cholera poison may, as a result of want of strict cleanliness, be transferred to the mouth by the fingers, either directly or by means of food.

It is universally accepted that the great, the persistent and the almost universal mode by which the Cholera germ gains access to the body is in the drinking water. This is now so well recognised that it is unnecessary to go again over the evidence by which this has been proved to demonstration. It is unnecessary here to refer to the classical examples of this mode of Cholera distribution.

This, however, in my opinion, is not the only mode by which the disease is spread in the larger cities of India. When a wholesome supply of drinking water is provided, the ignorance and carelessness of the people in preventing the pollution of the domestic supply, the storing of water in dirty vessels and the constant use of well and tank water to which infection may be conveyed must be an important factor.

The habits of the people, the customs with regard to the dead, the modes of preparing and consumption of food, and the insanitary condition of their houses, the proximity of privies and bathing places to living rooms and the opportunity given to food and milk to become infected by personal contact and flies during an epidemic must provide an enormous source of danger.

Individual susceptibility.

The etiology of Cholera is not, however, completely explained by the statement that it depends on the ingestion of Cholera infected water; another condition is also necessary, namely, the susceptibility of the individual. Considerable differences exist in the habits of the various members of every community; thus, it often happens that even where the habits of the majority are foul, a few are protected from receiving the infection by the greater cleanliness and propriety of their lives. Yet many fail to sicken, although they are known to have swallowed the very infective matter, which at the same time is producing Cholera in others. We have proof of this in every widespread water epidemic; the number of those who swallow the poison must in these cases vastly exceed the number of those who are attacked by the disease. Macnamara gives an instance in which a vessel of drinking water was accidentally polluted with fresh Cholera excreta, and after being exposed to the sun all day the water was partaken of by nineteen persons; of these five only subsequently suffered from Cholera. It seems clear that the inhabitants of the areas in which Cholera is frequently present, notwithstanding habits which expose them continually to chances to infection, are much less frequently attacked than new arrivals in the districts, much less, for instance, than Europeans who, although when attacked, succumb more readily.

Dissemination by human intercourse.

There can no longer be any doubt that Cholera is disseminated by human intercourse. The march of Cholera coincides with the march of man and it is carried from place to place either by infected man or by Cholera tainted clothing. The part played by pilgrimages, *e. g.*, the pilgrimages to Mecca, is well-known and severe outbreaks and wide dispersion have often followed on such movements of large bodies of men.

Certain as it is, however, that man is the porter by whom Cholera is introduced to any place, its development in that place depends on insanitary circumstances, the chief condition necessary being the liability of the drinking water to be contaminated by infected excreta. There are probably other but more obscure conditions still unknown to us.

Habits of inhabitants.

Even amidst the conditions of soil and climate most favourable or most inimical to Cholera, its prevalence largely depends upon the habits of the people; however largely present its contagium may be, it is harmless unless swallowed. Thus, among all the influences making for Cholera, the most important are those habits of carelessness as to the cleanliness of food and drink, which make it easy for either the one or the other to be tainted with fœcal material.

Investigations in to possible causes of the outbreak.

On the appearance of Cholera in any part of the City, the methods adopted for the investigation of its causes are as follows;—

The name, age, sex, occupation, place of work and length of residence at present address are inquired into; and the information sent daily to the Head Office by the Registrars of Districts.

The food supply, milk supply and water supply and the possibility of infection from a former case, either in the City or outside, form the subject of inquiry.

If a case existed in the premises, the water is examined, and if a well or tank exists it is treated with Permanganate of Potash as a precaution. Each case is followed up, and the connection with a previous case ascertained if possible and all precautions are taken to prevent the spread of the disease.

We have had during the past ten years many outbreaks of Cholera, chiefly due to the importation of the infection by Pilgrims from Mecca, Nasik, Pandharpur or other infected place, and with the exception of that in 1906, the epidemic has never assumed serious proportions.

In the present epidemic, although in the majority of cases, the history was inquired into, and in many instances traced to imported cases, the rise was so sudden in B Ward on the night of the 10th June, that we directed our investigation to B Ward, especially in Mahomedan

quarters, as a very large proportion of deaths occurred in that Ward and chiefly among Mahomedans.

To summarise the results of our investigation: During the early part of the year, cases were imported from outside. The disease was prevalent in all the Districts surrounding Bombay, owing to famine conditions. Many people came to Bombay, in addition to the ordinary immigration, due to the attractions of a large industrial centre. The mean monthly death-rate from Cholera during four months from January to April was 33 compared with 80, the monthly mean of the previous five years. In May the disease began to rise and 12 imported cases were reported.

On the 11th June, there was a sudden rise in B Ward in Mandvi, Chukla, Umerkhadi and Dongri, chiefly amongst Mahomedans.

For the whole of the City, the Cholera death-rate for June was among Hindus ·7 per 1,000 of population and among Mussalmans 2·5.

The outbreak appeared throughout to have its centre in B Ward, and we directed our efforts to trace each case with special regard to particulars already given.

Water-supply.

The Municipal water-supply is from Vehar filtered water and Tansa unfiltered mixed from Bhandarwada Reservoir. Every week for the preceding three months, this supply had been carefully examined bacteriologically in the Laboratory, and no evidence of any contamination with fœcal matter or the presence of any pathogenic organism was found.

There was scarcity in the supply and for several hours in the day the supply was shut off. There is no evidence that the Municipal supply from the Reservoir at Bhandarwada was the cause of this outbreak. The water from Vehar and Tansa is supplied to many parts of the City, where no cases of Cholera occurred.

There is always a possibility of the water in the service pipes in the City becoming contaminated during non-supply hours, owing to their exposed position, but the same water was supplied to many other parts of the City, and these were not affected with Cholera, and the chemical and bacteriological analysis shewed no pollution; there is, therefore, no evidence to assume that the Municipal supply was the cause of the outbreak.

Owing to the unusually hot weather, the day temperature was over 94 for weeks, and the shortness of the supply induced people to store water in the house and use water which was in constant danger of pollution.

The habits of the people and the insanitary condition of their houses and their religious customs have been dealt with elsewhere. What was wanted was the direct evidence of pollution of tanks or wells or of vessels in the streets.

A very large number of samples was examined bacteriologically and it was found that many tanks and wells were grossly polluted.

This was only to be expected, and this, I consider, was one of the chief channels through which the disease was spread. I have already alluded to other ways in which Cholera may spread and it is not difficult to understand, given such facilities, why such a disease is not only difficult of control but difficult to trace also.

Collections of people.

Allusion has been made to the collection in B Ward of some thousands of Mahomedans on the days previous to the night of the 10th June, the day preceding the sudden rise in the Cholera mortality, and the fact that numbers of people congregating in the area during an intensely hot week to do honour to the Pir Saheb of Baghdad and the probable contamination of the vessels in the streets, the using of well water, tank water and water supplied by Bhistis from wherever it could be got and stored in houses probably infected, cannot but be accepted as a great factor in causing the sudden and localised rise in the mortality in that locality. The infection was localized in B Ward at first and was not due to the Municipal water-supply as it came from the Reservoir, but to water infected from human source, either tap water stored in houses or wells, tanks, etc. In this connection the following circumstances are interesting:—

During the middle of the outbreak in B Ward, it was suddenly announced that a Hindu Festival was to take place on Sunday and Monday, the 23rd and 24th June, in Bhuleshwar where some thousands of Hindus were to meet and feast at Madhav Baug.

Only a day's notice of this assembly was given, but the assistance of the leaders of the community was asked for. Public instructions were given to all attending the Temple compound and everything done under the circumstances to prevent an outbreak. Sanitary Inspectors and Medical Officers remained on duty at the Temple and the people were advised to boil all water and to drink tap water only.

The same supply of Municipal water, as that for B Ward, was used in addition to water from a well in Cawasji Patel Tank Street.

The water was examined and found free from any Cholera Vibrio.

No outbreak occurred, although many thousands of Hindus attended the feast, and made a procession through the Hindu part of that locality. All the food was cooked at the Temple and during the procession nothing partaken of.

This is only to show that, while the public water-supply was the same, the facilities of contamination of domestic supplies were not so apparent.

The bacteriology of Cholera has provided the subject for an enormous amount of work. Koch, who discovered the Comma Bacillus Vibrio, visited India in 1883 and was followed by Klein and Gibbes in 1885 and later by Haffkine. Bacteriology.

There is an enormous field for further scientific research in the bacteriology and epidemiology of Cholera.

With the improved technique of the laboratory and the opportunities now given for research work in Tropical Diseases, the investigations into the bacteriology and epidemiology of Cholera should be considered of the first importance.

It is unnecessary to repeat the investigations of eminent observers and the enormous amount of work done in the bacteriology of Cholera which have brought us to our present knowledge. It is accepted, rightly or wrongly, that the Vibrio called the Comma Vibrio of Koch is associated with Cholera; that the organism exists in the stools of Cholera patients, that it can be isolated and can exist in water; that the stools of Cholera patients, either directly from the body or from the clothes and discharges, can infect water and food and milk and thereby convey the disease.

From our investigations by daily visits of inspection to the infected houses, streets, wells and tanks in B Ward and from bacteriological examination, there is sufficient evidence to assume that the water had been polluted, directly or indirectly, from Cholera cases.

In order to ascertain the probable cause of an outbreak, in addition to the epidemiological investigations, we examined many samples of water, from wells, tanks, open vessels and tap water and also made *post mortem* examination of intestines and the fæces of patients dying of the disease.

During January to June, 114 samples of Municipal waters were examined in the Laboratory, 257 samples of other waters, 16 of milk and food-stuffs and 18 of excreta of Cholera patients.

During my visits of inspection, my attention was drawn to the following:—

(1) To provide water for the people large earthen vessels were placed in the street.

They were filled with water by Bhistis from tanks, stand-pipes and wells.

(2) That during certain hours of the day and night the Municipal water-supply was shut off, owing to the scarcity of supply and that Bhistis were providing it to the houses.

(3) That stand pipes in the City were used as bathing places and for washing clothes and utensils.

(4) That Bhistis filled their *mushaks* at these stand-pipes immediately before, after, or if possible, at the time people were washing their bodies and clothes.

(5) The large Reservoir at Pydhoni, adjoining the Police Station, was a favourite place for this purpose, and although there is a notice pointing out that these stand-pipes were not meant for washing bodies and clothes, and although it adjoins the Police Station, dozens of people are to be seen daily fighting for water and washing their clothes.

This was pointed out to the Police who temporarily stopped it.

Bhistis, when they cannot get a supply of water from stand-pipes, get the water from tanks, wells, at Mosques and other places and carry the water to private houses, where it is stored in various kinds of tubs, earthenwares, pots, &c.

The possibility of conveying infection through water is apparent.

The Bhistis' *mushaks* during the out-break were washed with Lime and Permanganate solutions.

Now supposing that water is contaminated with material from an infected house, person or clothes, it is not unreasonable to assume the probability of the disease being spread in this way.

I therefore took samples from open vessels in the streets and houses, tanks and wells in the Mosqhes.

It was found, from the result of the analyses of the many samples that were sent, that the majority of the waters were contaminated with fæcal matter, and in some instances an organism having cultural characteristics of the Cholera Vibrio was detected.

Although a Vibrio was present in many samples, it was not until we examined a sample from a well, in a Mosque in Kazi Syed Street, that we arrived at what appeared to be the real Cholera Vibrio.

The well is inside the Mosque and, adjoining it, a tank and a place where dead bodies are washed in the Mosque. Three deaths from Cholera occurred here and many dead bodies were washed in a place close to the well and tank. Outside Mosques are galvanised vessels filled with water for the use of the passers-by.

As has been pointed out, to obtain a pure culture of the Cholera Vibrio in a well or tank water is not easy, especially in India where many other vibrios exist.

Water is much fouled with organic matter, and the presence of other bacteria to a certain extent smothers the Cholera Vibrio.

Captain Gloster, I.M.S., who was deputed to study the outbreak of Cholera on behalf of the Scientific Research Committee, also took a sample of the water, but did not pursue the investigation on account of innumerable bacteria present, but said that fæcal matter was present.

Captain Gloster, however, made the further research into this particular organism, sent to him by us, and he submitted it to the many tests which must be positive, or the vibrio, according to some observers, cannot be accepted as a true Cholera Vibrio.

Captain Gloster did not find this organism agglutinating to Anti-Cholera Serum, nor to give a positive reaction with Pfeiffer's test.

The bacteriological tests which were used in the Municipal Laboratory are as follows :—

(1) 90 c. c. of the water to be examined was put in a narrow mouthed flask with 10 c. c. of an Alkaline Peptine solution and incubated for 24 hours.

(2) This was then examined microscopically and after staining with Carbol-Fuchsine and if vibrios were present—

(3) A loop-full of the Peptone solution was inoculated into a sterile broth culture medium.

(4) A sub-culture was immediately made in agar slant tube.

(5) Further dilutions were made in another broth tube.

(6) A further sub-culture was made into slant agar tube and incubated for 24 hours and then examined microscopically as in No. 2.

(7) Colonies from the agar were then further sub-cultured on agar and subjected to other tests.

Another method : 24 hours' Peptone cultures were plated out on agar petri dishes and incubated for 24 hours, and the colonies were examined.

Pure cultures were then examined as follows :—

Microscopically, stained as before, motility, Cholera red re-action, Nitroso indol, Ehrlich Rosindol reaction, staining for flagella, Agglutination and Pfeiffer's test.

All the tests mentioned above were applied to the Vibrio isolated from this well water in the Municipal Laboratory and found to be positive with the exception of the Pfeiffer test.

This was undertaken by Capt. Gloster at the Parel Laboratory and was found to be negative, nor did he get agglutination.

Now if there is any organism that varies in its cultural, morphological and pathogenic properties, it is the Cholera Vibrio and from the latest investigations, with the most modern bacteriological technique, it is stated that "the power of anti-Cholera serum to agglutinate the Vibrio is very variable."

"That because either agglutination or Pfeiffer's test is negative, it does not follow that, in the presence of an epidemic, a Vibrio not responding to these tests should not be considered to be a Cholera Vibrio for all practical purposes."

Under the circumstances, I considered that from our investigations it was proved that this well water was infected with material from Cholera patient, and that it was possible many other wells and tanks and water vessels were infected in a similar way.

This is as far as any observers have ever got in the bacteriology of the disease, and until we know more, we must assume that Cholera is spread in this way.

I maintain, for the practical Sanitarian, this is enough to work upon.

Given an outbreak of Cholera, whether imported or indigenous, any sample of water, from which a pure culture of the Comma Vibrio is obtained, is sufficient evidence for active preventive measures.

I am strongly of opinion, that the Cholera Vibrio, after it leaves the human body, undergoes such rapid modifications, in water, milk, food, soil, or even on the soiled clothes and discharge of the suffering person, as to render it almost unrecognisable.

The organism, fortunately for the human race, is very faintly resistant to external influences; and it is for this reason, that when an out-break occurs, prompt sanitary measures can control it.

How far, and how long, a Cholera Vibrio can retain its virulence externally to the human body, and how far the other organisms in water affect it, are still subjects for further investigation.

How the attenuated organism, found in water, can again regain its virulence when entering the body of its former host is what we want to know.

Until then the practical Sanitarian must consider all water, containing a Comma Vibrio in the presence of a Cholera out-break, a danger, which, by all the means in his power, should be attacked.

Without entering into the bacteriology of the innumerable Cholera-like Vibrios, found in water and fæces, the presence of a Comma Vibrio in water during a Cholera epidemic is evidence of contamination from a case of Cholera. It is, as I have already pointed out, held that the virus has to be swallowed to be pathogenic, and that personal contact has little to do with the spread of the disease. To this latter theory, I take strong exception.

Without labouring too much on the habits and customs of the people, I am strongly of opinion that the spread of Cholera in India is greatly due to direct infection from person to person by means of discharges, contaminated hands, food, vessels, milk and water and flies.

The filthy privy baskets over-flowing into open drains and thus soaking into sub-soil or storm-water drains, the position of the water sewer pipes and the common washing places are a constant danger at any time, but, in the presence of Cholera, must contribute to a large extent to the circumstances favouring the spread of the disease.

For example, on visiting a person suffering from the disease, he or she will be surrounded with relatives and friends handling the patient. Many will be found occupying the same room, sleeping on the floor; they will use the same privy and washing place, eat from the same vessels; the water is stored in wooden, iron, earthenware, or other vessel, in the living room, cook room or *nahani*, for days together. The friends and relatives will wash the dead body and take it to the burial ground or burning *ghat* and afterwards wash in the nearest tank or bathing place, without any disinfectant precautions.

Any one familiar with the homes of the poor can easily understand how Cholera is thus spread.

Conclusions

Cholera was prevalent in a sporadic form in May and June in Bombay.

It was prevalent in the surrounding Districts in epidemic form.

12 and 26 cases were imported into Bombay in May and June.

Many more cases must have either been imported, or developed the disease, after arrival, or may have come to Bombay suffering or convalescent from infected localities.

A person convalescent from the disease, or suffering from it in a mild unrecognised form, is a danger to the community as a "carrier."

Such a case, unknowingly, may convey the infection to *nahanis*, privies, washing and drinking vessels, or the food-supply or even a public water-supply, and thus start an outbreak in the neighbourhood.

May and June were unusually hot months. The Municipal water-supply had been curtailed in B Ward.

On the 10th of June and some days previous, large collections of Mahomedans congregated in Mandvi, Umerkhadi, and Chukla.

Water had to be provided for these large crowds.

Given then a few cases of Cholera in these Sections, it is possible that facilities were offered to the pollution of the temporary water-supply, provided for the people, which was infected and thus caused the sudden rise in the incidence of the disease.

As soon as the temporary supply of water was abolished, tanks and wells disinfected and cleaned, the disease began to disappear.

Cholera Vibrio was only found in one tank, but, as many of the others had already been cleaned or disinfected, it is not to be expected that this very volatile organism would be found there.

This is nothing new in the epidemiology of Cholera, as witness the Fairs held in India.

Large crowds of people assemble, Cholera breaks out, and is only checked when the Fair is over, or proper sanitary precautions have been taken to prevent the pollution of the water-supply, and other sanitary precautions observed with regard to food and cleanliness of the camps, and destruction of all infected material.

Many persons leaving the Fairs perfectly well are attacked or die on their way home or recover and return to their homes convalescent, thus becoming a focus to spread the disease elsewhere.

Facilities of transit are so many that the disease may be carried hundreds of miles in a few hours.

Bombay City is a very small unit of the Indian Empire, or even of the Bombay Presidency, but it is the haven of refuge for the destitute, as well as the prosperous, in times of famine and sickness in the neighbouring districts, and thus pays the penalty of its position.

The difficulties of obtaining information from the friends and relatives of infected people, the passive resistance to any sanitary measures, make it extremely difficult to trace cases of infectious disease or to adopt measures for their control.

The indifference and carelessness on the part of the poor people to accept any advice adds to the difficulties of control, while the ignorance of any measures of personal hygiene and the rooted objection to any innovation in their domestic arrangements form obstacles difficult to overcome.

So much about the unusually severe outbreak of Cholera in June and the special investigations carried out into the probable causes of it, in respect of which a special Report was submitted to the Municipal Corporation.

July and August.

The history of the disease in the following months was one of rapidly diminishing prevalence. The incidence of the disease fell from 1,239 cases and 961 deaths in June to 352 cases and 283 deaths in July and 193 cases and 150 deaths in August.

Importations.

Of the cases in July, 17 were imported from outside: 3 each from Thana, Pandharpur and Surat; 1 each from Kolhapur, Rajapur, Satara, Bassein, Jeytapur and Poona; and 2 from the Harbour. Of those in August 6 were imported; 1 each from Ahmednagar, Karjat, Hyderabad, Nasik, Panchgani and the Harbour.

September and October. Importations.

September registered 41 cases and 29 deaths and October 31 cases and 21 deaths. In the former month, 3 of the cases were imported from Rahimatpur, Ahmedabad and Khandala; in the latter, 3 of the cases were imported from Alibag and 1 from Satara.

November.

November witnessed still further reduction—15 cases (including 4 imported from Pandharpur) of which 12 proved fatal.

But the dying spark was again fed and kindled in December by more frequent and numerous importations from the Districts—chiefly of Thana and Poona by the pilgrims from the Fairs at Nirmal and Alandi.

December. Importations.

The sudden rise in the incidence of the disease is indicated by 111 cases and 79 deaths which were registered from it; 41 of the cases having been imported: 17 from Nirmal (Thana), 15 from Alandi, 4 from Nasik, 3 from Pandharpur, and 1 each from Rameshwar, and Janjira. After the 19th of the month, importations ceased; there were 4 on that date and 12 cases and 9 deaths from the disease were registered in the City on the 20th. During the remainder of the month Cholera again declined and 27 cases and 20 deaths were registered.

Thus in the whole year, 2,308 attacks and 1,790 deaths from Cholera were registered; of which 124 cases were imported into the City from outside and 87 deaths occurred among new arrivals, who brought in the disease from the mofussil and acted as foci for the spread of infection.

Cholera by Race and Sex.

Of the 1,790 deaths from Cholera, 1,119 occurred among Hindus of all castes—743 being males and 376 females; 516 among Mahomedans (including 3 males and 5 females among Negro Africans), 373 being males and 143 females.

Native Christians contributed the next highest mortality (86); 57 among males and 29 among females; Parsees come after them with 36 deaths—21 male and 15 female. 2 female deaths from the disease occurred among Eurasians and 5 male and 4 female deaths among Europeans.

22 deaths were registered among Jews, 8 male and 14 female.

Among Hindus, those of higher castes suffered comparatively little; only 68 deaths from the disease having occurred: 55 males and 13 females. Hindus of other castes suffered heaviest: 614 males and 314 females having succumbed to the disease. On the other hand, Hindus, low caste, registered 74 male and 49 female deaths.

Of the total mortality from the disease, 1,207 deaths occurred among males and 583 among females.

Cholera by Sex and Age-groups.

Of the total of 1,790 deaths from Cholera, 1,204 (848 males and 356 females) or over 67 per cent. occurred among population 15-40 years of age; 281 (185 males and 96 females) or over 15 per cent. were registered among persons in the age-group of 40-60 and 260 deaths (153 males and 107 females) or over 14 per cent. in the age-group of 1-10 years.

Among children up to 1 year of age, there was no death from the disease in the first month of life, 2 deaths (1 male and 1 female) in the next stage (1-6 months) and 4 deaths (3 male and 1 female) in the group of 7—12 months.

Cholera by Sections.

By far the largest number of deaths from Cholera occurred in Umerkhadi (293) and Mandvi (175) and Dongri (122) Sections; these were the chief affected centres of the serious outbreak in June; the death-rates per 1,000 of the Sectional population being 6·41, 5·27 and 4·47 respectively. The death-rate for the whole City was 1·82; and the Sections which registered a higher rate were, in addition to those mentioned above, Chukla (3·75—91 deaths), Tarwadi (2·42—69 deaths), Girgaon (2·33—72 deaths), Dhobi Talao (2·32—90 deaths), Kumbharwada (2·31—64 deaths), Fanaswadi (2·22—61 deaths), Fort North (2·08—53 deaths) and Khara Talao (1·95—45 deaths).

The Sections least affected were those of G Ward—Mahim (·26), Worli (·62); and 1st Nagpada (·62) in E Ward.

No Section of the City escaped infection with fatal results.

Improvement of Sanitary arrangements at Pilgrim Centres.

The history of the outbreak and prevalence of Small-pox and Cholera in the City during the year under report has again brought into relief the repeated importations of the diseases from outside and the constant risks to which this City lies exposed in consequence and the penalty it accordingly pays. "The history of Cholera in the City, like that of Small-pox," I observed in my Annual Report for 1909, "is a history of continual importations from outside."

In an earlier Report (1906) I recorded the observation that "the most notable feature of Bombay epidemics is that the outbreak of any of them is generally synchronous with the prevalence of the same in the Districts outside, and that its severity and spread are much influenced by the unrestricted arrival of sick passengers allowed to travel by Railway."

I have now and again brought these facts to the notice of Government, and written to Collectors of Districts, and Presidents of Municipalities where these exist, to arrange to stop sick persons or those in contact with infected persons from proceeding on their journey. Government have also been pleased to issue instructions on similar lines which have materially helped to minimise the importations; but this has not always been possible or completely successful.

It was necessary to go to the root of the matter. For often at large Pilgrim Centres many thousands of pilgrims, converging from long distances, live under conditions most prejudicial to health, as sanitary arrangements are often imperfect or out of the question; and when any disease breaks out, it is rapidly disseminated as the pilgrims start on their way home, without any control, and act as foci for the spread of infection during their journey and at their destination.

I am glad to be able to record in this connection that the Government of India have started an "inquiry (*vide* Government Resolution, General Department, No. 1317 of 17th February 1913) into the possibility of improving sanitary arrangements at Centres where Hindu and Mahomedan Pilgrims congregate for worship or for starting their journeys to holy places"; and a strong representative Committee has been appointed for this Presidency and the results may be looked forward to with lively interest.

Tuberculosis.

Although much has been said and written concerning the prevalence of Phthisis (Tuberculosis) in Bombay, very little has been done hitherto with regard to the prevention of the disease.

In my Annual Report for 1910, I gave an extract from a Report made to the Corporation on "How Tuberculosis is spread in India" and what action should be taken to prevent it.

Since 1903, Phthisis has been a notifiable disease in Bombay and every house in which a case or a death occurs is visited and disinfected.

Leaflets on the precautions to be taken are distributed and lectures given. The Municipal District Nurses and the Health Visitors of the Bombay Sanitary Association make frequent visits to houses and advise the parents and relatives.

In England, the Public Health (Tuberculosis) Regulations, 1908, provide for the notification, within 48 hours, of Tuberculosis of the Lungs, occurring in any person, either an inmate of a Poor Law institution or in receipt of out-door Poor Law relief. They also provide that the Medical Officer of Health is to be informed, when the patient is discharged from hospital, of his actual or intended place of destination; and also any change of address by the Relieving Officer.

The Public Health (Tuberculosis in Hospitals) Regulations, which came into force on the 1st May 1911, extend notification to cases under treatment in Hospitals generally, including Dispensaries.

The Public Health (Tuberculosis) Regulations, 1911, came into operation on the 1st January 1912, and provide for the compulsory notification, by the Medical Practitioner, of all cases of Pulmonary Tuberculosis, provided that the Medical Practitioner need not notify any case of Pulmonary Tuberculosis that has been previously notified under the Poor Law Regulations or under the Hospital Regulations.

On receipt of the notification, the home of the patient is visited, and full enquiries made into the history of the case; the condition of the home, habits of the people, and the general sanitary arrangements of the premises are also reported upon. An instruction card, containing "information for Consumptive People and those who live with them," is freely circulated, and, if necessary, full explanation is given. Disinfection of the house and bedding follows, and if the patient remains at home, the premises are also periodically disinfected.

An Officer of the Sanitary Staff subsequently revisits the home, and, if necessary, advises the patient as to the need for absolute cleanliness, free ventilation of the rooms, and care in dealing with the expectoration, and notes that the general instructions embodied in the instruction card are being followed.

The wave of Anti-Tubercular Measures, which spread all over the world during the past few years, reached India, and at the suggestion of His Excellency Lord Sydenham a General Meeting of the citizens of Bombay was called, at which His Excellency presided, to consider the question. The result was the formation of the King George V Anti-Tuberculosis League.

A representative General Committee was appointed for the purpose, and from it a small Executive Committee was nominated. Two smaller Committees, one dealing with Finance and the other with the Scheme of Anti-Tuberculosis Campaign, were subsequently nominated.

The work of the Executive Committee.

Finances.

The Executive Committee applied itself firstly to collect funds for the League, and, secondly, to make an early beginning in practical work by establishing a Central Tuberculosis Dispensary and Information Bureau. The Government of Bombay on being approached for assistance, granted to the League an annual donation of Rs. 10,000 for a period of three years and the Municipal Corporation of Bombay also sanctioned a similar amount for the same period.

The conditions under which Mr. Ratan Tata's offer was made were determined to this effect :—That the amount of his contribution for the first year was to be Rs. 15,000 and the same amount during each of the nine years following, provided the total funds of the League inclusive of the Government and Municipal contributions would aggregate Rs. 1,35,000 and failing that, a sum equal to 10 per cent. of the yearly contributions, but in no case was his total yearly contribution to be less than Rs. 5,000 per year. The Executive Committee thankfully accepted the above proposals.

The Millowners of Bombay, the Railway Companies and other large employers of labour were approached for a contribution to the League according to the number of hands employed by them. Through the kind offices of Mr. B. J. Padshah, the Tata Mills at Coorla, Sir Shapurjee Broacha, Sir Cawasjee Jehangir and Mr. Narottam Morarji Gokaldass have already expressed their desire, so far as their Articles of Association permit, to contribute to the Funds of the League at the rate of Re. 1 per employé per year. As soon as the plan of campaign, prepared by the Executive Committee, is published and circulated, it is anticipated that other large employers of labour will contribute in a like manner.

It has also been arranged that there should be enrolled a list of Annual Members and Life Members, with the subscription of Rs. 5 and Rs. 100, respectively.

Plan of Campaign.

The plan of Campaign necessarily requires a large sum of money annually, if any good is to be expected.

The League proposes to restrict its efforts to measures for the prevention of Tuberculosis in its varied manifestations, and with this view, it has devised the following plan of campaign (which is subject to modification as required) as the best suited to local conditions and most likely to ensure early and adequate results :—

1. Notification of Disease.
2. Tuberculosis Dispensaries.
3. Education of the People.
4. Medical Inspection of School-children.
5. Supervision of Milk and Food supplies.
6. Special Fund to Relieve Distress.
7. The rousing of Public interest in Tuberculosis.

(1) Notification of Disease.

The cordial co-operation of the Department of Public Health, and Medical Practitioners in the City by notifying cases of Consumption and thereby placing the poor and needy in touch with our Dispensaries is essential, for the purpose of preventing the dissemination of infection.

(2) Tuberculosis Dispensaries.

(i) In order properly to treat those who cannot afford to pay for ordinary medical treatment from private Practitioners, provision of Dispensaries is absolutely necessary. One

Central Dispensary and Information Bureau, complete in all requirements with a Bacteriological Department, has been already established at Pattani Building, Princess Street, at a cost of about Rs. 7,500. It is under the charge of a fully-qualified medical man, assisted by one nurse, one clerk, one compounder and two servants. The maintenance charges, including rent, have been fixed at Rs. 1,200 per month. Individual patients will be examined and treated, their homes visited by the Medical Officer and Nurse; family and contacts examined for latent or manifest infection, and advice given for home care, better sanitary conditions and prevention of infection.

(ii) Provision of eleven more Dispensaries is contemplated by the League; these will be located in thickly populated centres, where mill-hands, railway and other employés and the labouring population mostly reside. The following localities have been provisionally selected for the purpose:—

(1) Fort South, (2) Tardeo, (3) Jacob Circle, (4) Kalachowki Road, (5) Junction of DeLisle and Fergusson Roads, (6) Elphinstone Road, (7) Vincent Road, (8) Coorla, (9) Frere Road, (10) Pydhoni or Bhendy Bazar, and (11) Umercarry or Dongri.

Each of these Dispensaries will cost about Rs. 5,000—Rs. 6,000 to establish and about Rs. 1,000 per month to maintain. In order to work these to full advantage, the co-operation of the Medical Officers of the Mills, Factories, Railways, Docks, etc., is essential.

(iii) It is also proposed to attach a Tuberculosis Department to some of the existing Free Municipal Dispensaries, if the Municipal Corporation consents to the arrangement. The initial cost of each will be about Rs. 4,000 and maintenance charges about Rs. 600 per mensem.

(3) Education of the People.

(i) Education of the general public and the working classes, with a view to the better understanding of the nature of Consumption, the risks from infection, the methods of guarding against the same, etc., and their practical demonstration will form the principal basis of preventive and educative work. That will be done by domiciliary visits of the Medical Officers and Nurses attached to the Dispensaries, and if possible, by the co-operation of a Ladies' Committee of Voluntary Workers, as in London and Dublin, who will also help and supplement the work of the paid staff.

(ii) *Lectures.*—Lectures with Lantern slides will be given in English, Gujerathi, Marathi and Urdu in various centres of the City; the services of paid lecturers will be entertained.

Short Lessons on Tuberculosis will be given in High and Primary Schools with lantern demonstrations.

(iii) A Central Museum will, in the first instance, be organised; subsequently small Tuberculosis Exhibitions will be moved about different parts of the City.

(iv) Leaflets in English, Gujerathi, Marathi and Urdu describing the early signs of Consumption, Instructions for Consumptives, Tuberculosis in Children, Benefit of Pure Air and Sun-light, etc., have been prepared and will be distributed broad-cast.

(4) Medical Inspection of School-Children.

As Tuberculosis must be sought early, and as it is rife in its various insidious manifestations in children, especially those of the constitutionally weak, and underfed, living under gross insanitary conditions, early recognition and treatment in childhood is a preventive measure of the first importance. The most practicable way, therefore, will be medical inspection of Schools and School-children, where Tuberculosis will be recognised and conditions assisting in lighting it up can be investigated and remedied.

(5) Supervision of Milk and Food Supplies.

The League contemplates devising and working special voluntary measures for the supervision of milk and food supplies and proposes to undertake research work in connection therewith. The purity of milk supplied to infants and its freedom from any taint of Tuberculosis are the recognised methods adopted in all civilized countries to prevent Tuberculosis in children.

(6) Help to the Families of Disabled consumptive Bread-winners.

The League, bearing in mind, the privation and destitution engendered by the disabled condition through consumption of the bread-winner of the family, desires to make an appeal for a Special Fund to relieve distress, to support the family, and thereby to minimise the risk of infection.

(7) Housing of Public Interest in Tuberculosis.

And finally, the League seeks to awaken the sanitary conscience of the general public by stirring up public opinion, whereby concerted efforts could be made to provide or assist in providing Sanitary Dwellings for the Poor and inculcate into them the best way of using the same.

It is the intention of the League to emphasize the importance of the establishment of Hospitals for advanced cases, of Sanatoria and Farm Colonies, of open air Schools and Homes for Cripples, and the segregation of infected *purdah* women in suitable institutions. These various institutions should be provided and maintained by Municipal bodies or out-side philanthropic agencies with or without Government aid. The League will always be prepared to assist with expert advice in their organisation, and, so far as its finances permit, to grant pecuniary aid wherever required.

The scheme now is in working order, and although not altogether a Municipal concern, it has the co-operation of the Health Department of the Municipality and all cases of Tuberculosis reported or discovered are inquired into. The Executive Health Officer and his Special Assistant in charge of the Infectious Diseases Hospital are the Honorary Secretaries. In course of time, the scope of work will increase and the Municipal Dispensaries form branches to carry on the crusade.

Other causes of death.—Measles.

As for other causes of death—Measles caused 210 deaths, being 442 and 124 less than in the preceding year and the average of the past five years respectively.

Influenza.

No death from Influenza was recorded during the year.

Whooping Cough.

To Whooping Cough 22 deaths were due, against 5 in the foregoing year and 10, the average of the preceding five years.

Diarrhœa.

Diarrhœa is responsible for 2,987 deaths, being 909 more than in 1911 and 951 more than the average of the antecedent five years.

Dysentery.

From Dysentery, 1,567 deaths were registered, being 560 and 456 more than in the past year and the average of the last five years.

Puerperal Septicæmia.

Puerperal Septicæmia claimed 417 deaths, being 78 more than in 1911 and 49 more than the quinquennial average (1907-11).

Leprosy.

96 deaths were due to Leprosy, being 8 and 10 more than in the previous year and the average of the preceding five years.

Cancer.

To Cancer 67 deaths were attributed, being 3 less than in the past year but 13 more than the average of the previous five years.

Premature Birth.

The number of deaths amongst children born prematurely was 219, being 44 more than in the preceding year and 51 more than the average of five years (1907-11).

Debility.

Debility caused 2,703 deaths, being 225 more than in 1911 but 115 less than the average of the previous five years.

Old Age.

To Old Age 2,104 deaths were due, being 301 and 181 more than in the preceding year and the average of the past five years respectively.

Diseases of the Nervous System.

From the Diseases of the Nervous System 2,236 deaths were registered, being 230 more than in the foregoing year and 216 more than the average of the preceding quinquennium.

Diseases of the Circulatory System.

The Diseases of the Circulatory System caused 388 deaths, being 37 and 57 more than in the past year and the average of the preceding five years.

Tuberculosis.

From Tuberculosis 2,794 deaths were registered, being 100 more than in the preceding year but 178 less than the average of five years (1907-11).

Phthisis.

Of these 2,179 deaths were due to Phthisis, being 101 more than in 1911 but 229 less than the average of the previous five years.

Diseases of the Respiratory System.

To the Diseases of the Respiratory System 9,686 deaths were due, being 1,046 more than in the preceding year and 1,126 more than the mean of the quinquennium 1907-1911.

Diseases of the Digestive System.

The Diseases of the Digestive System caused 1,360 deaths, or 155 and 234 more than in the foregoing year and the average of the last five years respectively.

Diseases of the Lymphatic System.

From the Diseases of the Lymphatic System 13 deaths were registered against 16 in 1911 and 19 the mean of the last five years.

Diseases of the Urinary System.

To the Diseases of the Urinary System 382 deaths were referred, being 82 and 95 more than in 1911 and the average of the five years (1907-1911) respectively.

Diseases of the Generative System.

The Diseases of the Generative System occasioned 156 deaths, being 18 and 8 more than in the previous year and the average of the past five years respectively.

Diseases of the Organs of Locomotion and Connective Tissue.

To the Diseases of Organs of Locomotion and Connective Tissue 131 deaths were due, being 38 more than in the preceding year and 22 more than the average of the last five years.

Accidents.

The number of deaths from Accidents and Violence during the year was 660, being 22 less than in 1911 and 64 less than the average of the last five years. Of these 51 deaths were due to poisoning, being 12 and 5 less than in the preceding year and the average of the previous five years respectively: of these 26 were suicidal, 19 accidental, 1 homicidal, 3 from snake-bite and in 2 instances the circumstances under which the poison was administered were not known; 94 deaths were due to drowning, being 3 less than in 911 and 18 less than the mean of the previous five years; of these 34 were suicidal, 33 accidental, 1 homicidal and in 26 cases the circumstances under which the deaths took place were not known.

Municipal Dispensaries.

The ten Municipal Dispensaries were open throughout the year to administer, as in the past, free medical relief to the sick poor of the City. Two more Dispensaries were added to these during the year, one at Purbhadevi Road from April and the other "Bai Gowrabai Dispensary" at Kamathipura from 7th September. The actual number of new cases (individuals) treated at the Dispensaries was 80,106 (51,621 males and 28,485 females) against 81,225 in 1911 making 3,81,416 the total number of attendances against 415,964 in the preceding year. Of these 2,018 patients were seen at their houses.

The diseases treated at these Dispensaries were Fevers, Small-pox, Measles, Plague, Diarrhœal Diseases, Diseases of the Nervous, Circulatory, Respiratory, Digestive, Urinary and Generative Systems and other General and Local Diseases.

In addition to the above, the actual number of new cases (individuals) treated at the Colaba and Victoria Bunder Charitable Dispensaries was 8,484 (6,133 males and 2,351 females) making 31,582 total number of attendances; out of these 120 patients were seen at their houses. A contribution to these Dispensaries is paid by the Municipality and they are under the direct control of the Registrar No. 1 District who visits them daily.

Notification of Infectious Diseases.

1,687 Notifications of Infectious Diseases were received during the year from Medical Practitioners in the City, against 1,551 during 1911; of these 619 were for Plague, 40 for Phthisis and other Tubercular Diseases and 1,028 for other Infectious Diseases.

From Hakims and Vaidyas 31 Notifications were received and on investigation by the Medical Men of the Department the diseases mentioned in 30 of them were found correct.

During the year, action was taken, under Section 421 of the Act, for failure to notify to this Department cases of Cholera which occurred at the Taj Mahal Hotel, against the Resident Medical Officer, with the result that he was convicted by the Chief Presidency Magistrate and fined Rs. 100 which is the maximum penalty under the law for the offence.

Certification of the Cause of Death.

During the year, 9,942 Certificates of the Cause of Death were received against 8,668 in the previous year; of these 4,891 were from Medical Practitioners, 289 from Hakims and Vaidyas, 3,712 from various Hospital Authorities and the causes of 795 and 255 deaths were certified by the Commissioner of Police and the Coroner of Bombay respectively. The cause of 586 deaths was certified by the Registrars after seeing the persons during their last illness and the cause of death of 27,882 and 538 persons was verified by the Registrars; in the former cases, on the information gathered from the relatives of the deceased, and in the latter after seeing the dead bodies. In 6 cases the cause of death could not be ascertained as the residence of the deceased could not be traced.

Visiting Nurses.

The Nurses and Midwives working under the District Registrars paid 38,643 visits during the year, against 37,875 in 1911, to houses, chawls and huts, and they enquired into 4,678 cases of ordinary sickness, 1,565 cases of Infectious Diseases and 2,070 deaths amongst the female population of the City. They also attended 949 confinements against 746 in 1911 and ascertained 9,718 births against 9,462 in the preceding year. Their work has already been examined in detail under Infant Mortality.

Certificates issued.

During the year 882 copies of Certificates of Registry of Death and 180 of that of Birth and 30 true copies of Birth and Death Reports were issued, and the total fees received on account of them and for searches of Birth and Death records for indefinite periods as well as for producing such records in Courts of Law amounted to Rs. 1,582-12-0.

The growing increase of work in the Department in connection with the issue of Certificates of Birth and Death Registry can be seen from the following Table :—

Year.	Copies of Death Registry issued.	Copies of Birth Registry issued.	True copies of Birth and Death Reports issued.	Total fees received.
				Rs. a. p.
1908	652	129	22	981 0 0
1909	726	112	29	1,113 14 0
1910	707	142	27	1,082 0 0
1911	754	145	32	1,385 0 0
1912	882	180	30	1,582 12 0

Notices under the Act.

The number of Notices issued during the year by the Health Department, under the various Sections of the Municipal Act, was 4,814 against 3,513 in the previous year. Of these 2,601 were complied with, 1,303 were not complied with, 320 cancelled and 590 are pending.

In 2,524 cases summonses were issued by Presidency Magistrates at the instance of this Department, against 1,746 in 1911. Convictions were obtained in 867 cases and in 804 cases the parties were warned and discharged ; 25 cases were dismissed ; 828 withdrawn, the offences having ceased. Out of these, 494 notices were issued in E Ward against overcrowding and 484 of them were complied with. In 28 cases summonses were issued by the Presidency Magistrate for not complying with the notices issued by this Department. Convictions were obtained in 23 cases, while 3 were withdrawn and 2 cases are pending.

Conservancy Work.

During the year, 717,806 carts of kutchra, drain stuff and other matter were emptied at the Tardeo Flats and other places in the City, against 721,752 carts in the preceding year. Of these 605,884 were Departmental and 111,922 private.

114,129 night-soil and cesspool carts and 4,363,785 night-soil baskets were emptied at the several Night-soil Depôts in the City during the year under report, as compared with 114,377 night-soil and cesspool carts and 4,314,968 night-soil baskets in the foregoing year. All the night-soil carts were Departmental.

ADMINISTRATION OF PUBLIC HEALTH.

Divisions of the City. (i) Wards.

For administration purposes, the City has been divided into seven Wards, each under the subordinate charge of a Deputy Health Officer, who is responsible for both the conservancy and sanitary work of his Ward. The Deputy Health Officers are assisted by a staff of Sanitary and Conservancy Inspectors, Assistant and Sub-Inspectors. The Deputy Health Officers are controlled by the Executive Health Officer who is assisted by two Assistants.

(ii) Registration Districts.

For the purposes of the Registration of Births and Deaths and free Medical Relief, the City has been divided into ten Districts with ten Municipal Charitable Dispensaries, each in charge of a Registrar with two Sub-Registrars and one trained Visiting Nurse and Midwife. Each of these District Offices is equipped with staff for registering births and deaths, enquiring into the cause of death, for checking Cemetery Returns and for Disinfecting houses and rooms where cases of Infectious Diseases may have occurred or dead rats may have been reported. During the year under report, two more charitable Dispensaries were opened, one at Purbhadevi and the other "Bai Gowrabai Dispensary" at Kamathipura, and are under the control of Registrars Nos. 10 and 8 Districts respectively. The work of the Registrars is supervised by the Deputy Health Officers and the Executive Health Officer with his two Assistants.

There is also a Special Assistant Health Officer in charge of the Arthur Road Hospital for Infectious Diseases and the Maratha Hospital for Plague.

There is another Special Assistant to the Health Officer for Malaria, in charge of the Special Malaria Department, organised in the middle of April 1912. The work which was formerly done by the Deputy Health Officers, in connection with the extermination of Malaria, is now done by the Special Department.

Municipal Laboratory.

For Analytical and Bacteriological examinations, there is a Municipal Analyst in charge of a fully equipped Chemical and Bacteriological Laboratory : chemical analysis and bacteriological examination of Municipal Waters is conducted by him.

Veterinary Establishment.

The Veterinary Staff includes four qualified Veterinary Surgeons with a Shalotri, who inspect the Milch Cattle Stables in the City and the Municipal Bullocks and are in charge of the Municipal Bullock Hospital.

Vaccination Establishment.

The Vaccination Staff includes, besides the Superintendent and the Assistant Superintendent, ten Vaccinators, one Head Clerk and four subordinate clerks and the menial staff.

Inspectorial Staff.

The Conservancy and Sanitary Staff, exclusive of the labour staff, consisted in 1912 of :—

3 Chief Inspectors,
8 Sanitary Inspectors,
9 Conservancy Inspectors,
1 Loading Siding Inspector,
6 House Drain Inspectors,
7 Assistant Sanitary Inspectors,
67 Sub-Inspectors,
1 Halalkhore Inspector,
5 „ Sub-Inspectors.

Establishment of a School of Tropical Medicine and Hygiene.

Government having referred a Scheme under their consideration for the inauguration of a School for Post-graduate study in Tropical Medicine and Hygiene for the consideration of the Municipal Corporation, my views, which were asked on the subject, were embodied in a report (No. 32,879/31-1-1912) which was to the following effect :

A proposal to form a School of Tropical Medicine and Hygiene in Bombay must have the support of all sanitarians and those interested in the Public Health questions of India.

But the proposal to make the King Edward Hospital an annexe of the Parel Laboratory is hardly one that can be accepted in the form suggested.

Our constant representations that more hospital accommodation for the poorer classes in the North of the Island, especially for mill-hands, have been due to the already over-crowded state of the two larger institutions, *viz.*, the Sir Jamsetji Jejeebhoy Hospital and the Goculdas Tejpal Hospital, and latterly the Adams Wylie Hospital—institutions containing about 570 beds in all. The two former institutions have been in existence for 66 and 35 years and the latter for about 8.

The Parel Laboratory, started originally to make Plague serum, was afterwards called the "Plague Research Laboratory" and, later on, the "Bombay Bacteriological Laboratory for Investigation, Research, and Teaching." According to Government (*vide* Government Resolution, General Department, No. 2446 of 24th April, 1906) the main objects of the Laboratory are :

"(*a*) The affording of assistance to all Government Medical Officers, in the discharge of their duties, by fulfilling the functions, of a "Pathological Diagnosis Institute," to which specimens of all sorts may be sent for opinion. Work for private persons and Institutions can also be done on the payment of fees according to the scale that will be laid down by the Government of India.

"(*b*) The training of Hospital Assistants and others in Elementary Clinical Pathology, the performance of inoculations and hypodermic injections, the preparation and use of disinfectants and other duties they may be called upon to perform in connection with their duties as Public Health Officials.

"(*c*) The affording of opportunities to Medical Men who may wish to do original work for themselves, or to practice or be instructed in the newer methods of diagnosis."

During all these years, the material provided at the Sir Jamsetjee Jejeebhoy, Goculdas Tejpal, the Arthur Road and Maratha Hospitals and the Leper Asylum has been enormous.

Thousands of cases of Plague, Small-pox, Cholera, Dysentery, Tuberculosis, Malaria, Relapsing Fever and Leprosy, besides other diseases, have been treated at the Municipal Hospitals and General Hospitals within easy distance of the Bacteriological Laboratory at Parel.

No City in the world ever has or ever will again provide such material and facilities for treatment, investigation and research and teaching ; but what has been done ?

It is stated that Post-Graduate teaching is unknown in India ; but looking at the facilities offered, with a laboratory within reach and teachers available—whose fault is it ?

Now that it is proposed to extend the Hospital accommodation for general diseases by building a Hospital on a site selected so as to be suitable for the mill population in the North of the Island, it is suddenly discovered that Bombay should have a School of Tropical Medicine.

It is urged that in the Tropics a knowledge of microscopical technique is necessary, because animal parasites play a large part in the spread of disease. Further, a training in Sanitary Science suitable for India can far better be imparted here than in Europe, since the important Indian Diseases such as Malaria, Fevers, Cholera, Plague, Dysentery, etc., hardly occur in Europe and can be studied with greater advantage in India than in Europe.

It must be borne in mind that a General Hospital is not the place where such diseases are treated and the student will have to go, as he does now, to the Municipal Hospitals for Infectious Diseases, for the training in these diseases.

Every one interested in Sanitary Science, which in India includes Tropical Diseases, must welcome any attempt to impart what we know to others and investigate further in the many interesting problems of the Tropics and to equip the medical student and graduate with all the modern methods of investigation. But it is not necessary to wait for the King Edward Hospital before doing this nor to annex this Hospital for the purpose. A Hospital is not required to teach laboratory technique nor for teaching Sanitary Science: the Laboratory has been there for years and the material for teaching at hand. If a School of Tropical Medicine is provided, ample facilities are available without waiting for the King Edward Hospital.

Hospital accommodation for Europeans suffering from Infectious Diseases.

Up to 1906, all Europeans and some Eurasians suffering from Infectious Diseases, Cholera, Small-pox, Plague, Measles, Enteric Fever, Erysipelas, Diphtheria, were treated at the St. George's Hospital.

In 1907, an arrangement was come to whereby Europeans suffering from Plague were sent to the Maratha Hospital—no accommodation being available at the St. George's Hospital. They are treated in a special Ward. The first European patient was admitted there in 1907, suffering from Plague (*vide* this office Circular of 10-6-1907).

Europeans suffering from Cholera, Small-pox, Diphtheria, Measles and Enteric Fever have up-to-now not been sent to the Arthur Road Infectious Diseases Hospital, which is and always has been intended solely for natives, chiefly of the very poor classes.

The Arthur Road Hospital was opened in 1892 for Infectious Diseases. When Plague broke out in 1896, Plague cases were sent to the Arthur Road Hospital: the total number of Plague cases treated there during the period from 1896 to July 1901, when the Hospital ceased to be a Plague Hospital, was 6,382. At that time the Hospital was only a temporary structure, but now it is a *pucca* built Hospital, with all the necessary appliances for the treatment of Infectious Diseases amongst natives.

During the last ten years, 12,188 patients were treated there: 5,337 Small-pox, 2,545 Relapsing Fever, 2,052 Observation, 680 Cholera, &c.

Since the opening of the Hospital in 1892, 29,374 patients have been treated as under:—

7,421 Small-pox, 7,476 Relapsing Fever, 6,532 Plague, 3,889 Observation, 1,956 Cholera, 1,001 Chicken-pox, 732 Measles.

The highest number of patients during one year was 4,319 (in 1898) and between 1905 to 1911, the highest number of patients on one particular day was 411 in 1905.

In 1909, a new ward on modern lines was erected, by private donation, for Small-pox.

The total accommodation is for 320 patients at the Arthur Road Hospital.

When an extraordinary out-break of Small-pox occurs, temporary wards are erected in the compound.

In 1899, 580 beds were provided.

The Hospital is well-built and well-ventilated and surrounded by a large compound and garden with Nurses' quarters and Administration Offices, Steam Sterilizer and Dhobi-ghat, Post-mortem Room and Mortuary and is lighted with gas.

The Hospital is under the control of the Executive Health Officer. The Administration, supervision and treatment of patients is under Dr. Khan Bahadur N. H. Choksey, M.D., with

European and Eurasian trained Nurses and other male and female staff, and, although not absolutely perfect, has done very valuable work and saved many lives.

In addition to this, there is a special Hospital for Plague, called the Maratha Hospital, at Connaught Road, opposite Victoria Gardens, pleasantly situated and lately much improved.

Since 1907, all nationalities have been received and treated: Europeans, Eurasians, Parsees, Hindus, Mahomedans, &c.

The control of this Hospital is under the Executive Health Officer. The Administration supervision and treatment of patients in this Hospital also is under Dr. Khan Bahadur Choksey, M.D., with trained European and Eurasian Nurses and Assistants.

From 1898 to 30th June 1912, 17,349 Plague cases (excluding observations) were treated there and from 1906 till 30th June 1912, 45 Plague cases (including observations) among Europeans and Eurasians were treated there. Dr. Choksey's experience in treating cases of Plague, Small-pox and Cholera is unique.

With the exception of Plague, all Europeans suffering from any Infectious Diseases were treated and accommodated in the St. George's Hospital up to the present time.

Government have under their consideration a scheme for building a separate Hospital for Europeans; the correspondence relating to this subject has been going on for some years. Government have decided to acquire land adjoining the Arthur Road Hospital for the purpose.

This is no new question. Many representations have been made for better Hospital accommodation for Europeans as well as Natives for Infectious Diseases (*vide* various Reports from June 1905). I have no desire to transfer the burden of this question to other shoulders (*vide* this office correspondence on the subject and Annual Reports of the Executive Health Officer).

The question now is—who is responsible for the provision of Hospital accommodation for Europeans suffering from Infectious Diseases—Government or the Municipality? If the latter, I feel sure that the Corporation will only be too glad to provide it; but the matter ought to be decided once for all.

Medical Inspection of School Children.

The Schools Committee have recognised the need of Medical Inspection of School children in the City advocated by me in a special Report on the subject in 1911; and decided "that a physical census of the children attending Municipal Schools should be taken, in the first instance by the Health Department," and that the Committee on being furnished with an estimate of the cost of undertaking the census, the Corporation would be moved to sanction the necessary expenditure; accordingly, the work of taking the census has already been commenced.

Installation of Refuse Destructor.

It is satisfactory to note that the Municipal Corporation have at last accepted my recommendation and sanctioned the installation of a Destructor for the incineration of refuse. It has been decided to put up an Incinerator of the most modern type on the site of Municipal Milch Cattle Stable on Bapty Road to begin with, the question of erection of an Incinerator near Carnac Bridge or on the Palton Road site being held over till the results of the working of the Bapty Road Incinerator are known. (Corporation Resolution No. 6649 of 13th February 1913). Tenders are now being invited for the purpose.

Milch Cattle Stables.

Draft amendments of the Municipal Act regarding Milch Cattle Stables are still under the consideration of the Corporation. The question of additional powers to deal with impure milk and adulterated ghee is under the consideration of Government.

Unwholesome food seized and destroyed.

The catalogue of unwholesome food seized and destroyed, under Sections 415 and 416 of the Municipal Act, by the staff of this Department in the different Wards of the City during 1912 is as follows:—

A Ward.—97 apples and 13,809 mangoes.

B Ward.—5,511 mangoes and 734 various other fruits.

D Ward.—69 mangoes.

E Ward.—680 mangoes, 80 pears, 16 water melons, 36 lbs. of grapes, 175 plantains, 80 oranges, 18 lbs. of potatoes and 40 lbs. of beef.

F Ward.—108 mangoes, 18 pears, 7 water melons, 1½lb. grapes, 160 plantains, 6 various other fruits, 322 lbs. of fish and 1,747 lbs. 1 cart load and 2 baskets of contraband meat.

G Ward.—24 apples, 1,620 mangoes, 32 pears, 8 water melons, 240 plantains, 25 oranges, 30 lemons, 30 custard apples, 44 cocoanuts, 7 pomegranates, 498 lbs. of potatoes, 1,098 lbs. of onions, 6½ lbs. of curds, 131 lbs. of sweetmeat, 6 lbs. of bhajias, 48 lbs. of groundnuts, 490 lbs. of pickles of sorts, 90 lbs. of Bajri flour, 198 lbs. of wheat, 60 lbs. of beef, 668 lbs. of meat and 1,403 lbs. of fish.

Work done by the Department: Appreciation.

The out-break of Cholera threw a large and sudden increase of work and anxiety on the staff, who met it with their usual zeal.

Dr. Choksey, the Special Assistant Health Officer in charge Arthur Road Infectious Diseases Hospital, the Deputy Health Officers of B and C Wards and the Conservancy and Registration Staff are to be congratulated on their efforts.

A large amount of Bacteriological work was done in the Laboratory. Mr. Pansare, the Laboratory Assistant, was particularly helpful.

The Special Malaria Branch under Dr. Shroff have carried out their duties satisfactorily; this Branch is now thoroughly equipped and good results should follow.

The improvement in the Conservancy and Cleansing Department continues. The Registration of Births and Deaths is still one of the most difficult problems and, until the Act is amended, will remain so.

The Vaccination Staff under Dr. Nerurker worked well and successfully.

The working of the Clerical Staff of the Head Office maintained its high state of efficiency under Rao Saheb Pai, Mr. Kowshik and Mr. Nagindas Jamnadas.

PUBLIC HEALTH DEPARTMENT,
BOMBAY, *7th April* 1913.

J. A. TURNER, M.D., D.P.H.,
Executive Health Officer.

Report of the Analytical and Bacteriological work done in 1912.

I have the honor to submit herewith the following report of work done in the Municipal Laboratory during the year 1912.

During the period under report 5,675 articles were received for examination against 5,198, 4,502, 5,089, 3,754 and 3,019 for 1911, 1910, 1907, 1908 and 1907, respectively. Out of these, 1,630 were examined chemically and 4,045 bacteriologically; in addition to these a few samples had to be rejected as follows:—

Six samples of milk sent for examination for Tubercle Bacilli, as the samples were received in a decomposed state:

Three of oil; quantity sent being insufficient for analysis:

Three samples from the Stores, (1 of Petrolatum, 8 of Gargoyle, and 1 of Petrolatum No. 0), these after being sent for analysis by the Storekeeper were recalled as the analysis of these was not required.

One of Dammar, as this Laboratory is not fitted to analyse such complicated substances.

Besides the above, substances taken for special research work are not included in the work mentioned above and mention of this will be made separately.

Well waters. 570 samples of well waters were examined as compared with 469 in 1911 and 295 in 1910; these were received and examined chemically for the Special Assistant to the Health Officer; Malaria, with the exception of one sample which was received from a private party; opinion could not be given in the case of five samples only, for want of particulars regarding the surroundings, etc.; the remaining 565 samples were reported as follows:—

Fit for potable purposes, including "fair" and "suitable" samples	90
Objectionable on account of high figures either for Total Solids, or Chlorine, or both	61
Suspicious	26
Unfit for potable purposes	388
Total ...	565

It may be mentioned that the opinions expressed above are from a *chemical* point only.

Tank waters, etc. There were six samples of tank waters for chemical examination and all of them were found to be unfit for potable purposes.

There were two samples of waters from private parties to ascertain their fitness for drinking purposes and examined as such with the result that one of them was found to be unfit and the other suitable for drinking purposes.

Three samples of storage tank waters were examined and only one was found to be unfit for potable purposes.

Aerated waters. Besides the above samples of waters, there were eight samples of aerated waters, of which one was tested for mineral poisons with negative results; the remaining seven were examined with a view to find out the suitability of the water used in their manufacture, with the results that the water used for five samples was found to be good, one showed organic pollution and one was found to be suspicious.

Bombay waters. In connection with the analysis of Bombay waters, 276 samples were examined chemically excluding the one sample of Powai Lake water sent by the Hydraulic Engineer, besides examining 1,187 specimens bacteriologically. Excepting the samples of Lake waters (Tulsi, Tansa and Vehar) all the samples were collected by this office (excluding three samples from Deputy Health Officers). The results of all these samples were reported to the Hydraulic Engineer through the Executive Health Officer. During the earlier part of the year Vehar

supply was examined every now and then as desired by the Executive Health Officer, and the results communicated. Out of 192 samples of Bombay Waters examined for Microbes per c.c., the lowest number in the case of a sample of filtered water was 44, and in the case of a sample of unfiltered water, it was found to be 103. 207 specimens were examined for Cholera, 197 specimens for B. Typhosus, 197 for Gartners and 197 for B. Sporogenes. Excepting in the case of Cholera the results for the rest were negative. 201 samples were examined for B. Coli (Lactose fermenters) and excepting seven samples, Lactose fermenters were detected in all.

Sea Water.

A sample of sea water was examined, as desired by the Executive Health Officer, collected from the sea near the Church Gate Railway Station and was reported as follows :—

Undistilled—

Total Solids	5,455	grains per gallon.
Chlorine	1,533	,, ,,

After distillation—

Total solids	9·	grains per gallon.
Chlorine	0·06	,, ,,
Free Ammonia	0·016	parts per million.
Alb. Ammonia	0·024	,, ,,
Nitrites	*Nil.*	

Milk.

Nine samples of milk were received for chemical analysis—7 from Deputy Health Officers, 1 from Health Officer, and 1 from Arthur Road Hospital—and were found to be genuine. The one received from Executive Health Officer was also examined bacteriologically, as it was complained that the bottles used by the dairy were dirty. The bacteriological examination showed the presence of staphylococci and gram-negative bacilli and absence of B. Typhosus, B. Coli, Cholera Vibrio, and B. Enteritides Sporogenes.

Milk for Tubercle Bacilli and Enteric.

164 specimens of milk were received for the detection of Tubercle Bacilli, 57 specimens of milk and one of Basundi for B. Typhosus and examined with negative results.

Butter.

Five samples of butter were received and all of them were found to be not genuine.

Ghee.

Out of the eleven samples of Ghee received, only one was found to be genuine, 9 were found to be fair, and the remaining one was found to be an ordinary sample.

Curds.

There were two samples of Curds, of which one was found to be good and the other fair.

Oils, &c.

There were 55 samples of oils for chemical analysis, out of which six had to be rejected, for reasons given above. Thus the actual number left for analysis was 49 ; out of these, one was examined to ascertain the nature of the oil and was found to be crude castor oil ; one was labelled " Vegetable oil," but was found to be not a genuine sample of vegetable oil containing a large amount of unsaponifiable matter ; out of the remaining 47 samples, nine were good, sixteen fair, six useful for burning purposes only and sixteen not genuine. These samples were received from License Department, Storekeeper, and from the Health Department.

A sample of liquid substance was sent by the License Department to find out what it was and was found to be Marine animal oil.

Sweetmeat.

A sample of sweetmeat was examined for mineral poisons and they were not detected in it.

Tallow.

A tin labelled as " Tallow " was sent by the Revenue and Refund Audit Officer to see whether it contains any ghee and was found to contain no traces of ghee.

Fat.

Eleven samples of fat were received, of which seven were from License Department. Out of these, one was for ascertaining whether it was fat and was found to be as such ; the remaining six were collected from different shops and sent by the License Department to ascertain as to what colour they would take, and after experiments it was found that Methylene blue and Crystal violet were taken well by different fats when added in a melted condition ; the three received from the Deputy Health Officer were to find out whether they match with the colour approved of by the Executive Health Officer for the colouring of fats removed from Chembur and were not found to match with the approved standard colour : the one received from the Executive Health Officer was examined for the presence of fat.

Action of Pot. Permanganate Solutions on Mosquito Larvæ.

With a view of finding out the larvæcidal power of Pot. Permanganate, solutions were made of different strengths and a definite number of anopheles larvæ were put into beakers, containing the different strengths of Permanganate Solutions and the following results were obtained :—

Potas. Permanganate.	1 day.	2 days	3 days.	Remarks.
1 grain)	+	+	0	Five larvæ were used for all the beakers and only one developed into a mosquito (4 grains to the gallon.)
2 grains)	+	+	0	
3 grains } to the gallon.	+	+	0	
4 grains)	+	+	+ V	A *control* was also used.
5 grains)	+	+	0	+ = Living ; 0 = Dead.
Control (Tap water)... ...	+	+	+ V	V = Developed into mosquito.

In the case of the fountain water from the Municipal Buildings, there was no development of Larvæ in $KMnO_4$ solution of 4 grains to the gallon.

Mention will be made of Condensed Milk, Cotton-seed oil, Albene, "Imitation Ghee," &c., under Research work (q. v.)

Mud, Vinegar, Tea, Coffee, Bread, Flour, Soap, Mortar, etc.

Besides the above there were 1 sample of mud, 1 of fat preparation, three of Vinegar, 19 of tea, 17 of coffee, 9 of bread, 98 of flour; 4 of soap, 1 of substance used in the preparation of sizing materials, 3 of lime, 2 of mortar, 1 of yellow powder and 470 of urine for chemical analysis.

Blood for Malaria.

Out of the 130 samples of blood, received for Malaria, no definite conclusion could be arrived at in 14 samples, as the smears were too thick, and out of the remaining 116, Benign Tertian Rings, etc., were detected in 17 specimens and Malignant Tertian including "Crescents" in 9 specimens. Out of these, only four specimens were other than Municipal. This work of blood examination has, however, been undertaken by the Special Assistant to the Health Officer for Malaria from 16th April 1912; the chemical examination of well waters for the Malaria Department is being carried on by this office.

Glycerine Vaccine.

1,674 capillary tubes of Glycerinated Vaccine were examined as to their sterility before being used for the Vaccination Department, besides supplying sterile water and agar to the Department.

Disinfectants.

In connection with the examination of disinfectants, there were three samples of Sulphur, 1 of Hydrochloric acid, 1 of Mercurial solution for chemical analysis, and 10 of Izal fluid, 9 of Izal powder, and 2 of Zendo fluid for bacteriological examination. Two samples of Creasotine and Cresoline were examined to find out their suitability for washing animal cages. Excepting the samples of Creasotine, Cresoline and Mercury Solution, all the rest were from the Executive Health Officer.

Sputum, Urine, Blood, Food-stuffs Fæces, etc, for bacteriologicale examination.

Besides the above there were 46 specimens of sputum for Tubercle Bacilli, 1 of sputum for Pus, 5 of urine for Tubercle Bacilli, 2 of urine for Gonorrhœa, 1 of blood for Typhoid, 6 of fish for Enteric Gartners, B. E. Sporogenes, Streptococci, Staphylococci and Coli, 2 of Basundi and milk for Gartners, B. E. Sperogenes, Staphylococci, Streptococci, B. Coli, 9 of blood for Filaria, 1 of stool for Dysentery, 1 of blood for Red cells count, 1 of Fæces and sewage for the isolation of B. Coli.

Bacteriological examination of waters.

1,745 samples of waters were examined for the detection of pathogenic microbes; this includes the 196 samples examined for microbes per c.c. (details under para. for Bombay waters) and 1 sample of water for the determination of the presence of Mosquito Larvæ, besides the 7 samples of waters examined for Cholera, obtained from a tank at Nirmal near Bassein.

Cholera.

The following samples were examined for Cholera vibrio:—

87 specimens of stools (details under Research work).
14 „ „ Milk.
6 „ „ Fish.
4 „ „ Sweetmeat
3 „ „ Butter.

2	specimens	of intestines (human) from *post-mortem* at Arthur Road Hospital.
2	,,	of ærated waters.
1	specimen	of bread.
13	specimens	of blood (agglutination test).
699	,,	of waters.
Total 831		

The following routine method was used in the examination of the above samples for Cholera :—

I.—*For samples of waters.*—90 c.c. of the water is transferred to a narrow-mouthed sterile flask containing 10c.c. of concentrated peptone solution. This is placed in the incubator at 37° C, from 18 to 24 hours.

II.—Smears are now made and examined microscopically after staining with 1 : 10 carbofuchsin. If the smears show any Cholera-like organisms, then one of the following methods is followed in isolating the pure culutre of Cholera vibrios.

III.—Method A. for Isolation of Cholera Vibrio—

(*a*) One loopful is removed from flask (No. 1) containing 24 hours' culture on peptone and put in a broth tube; this is labelled No. 2.

(*b*) A subculture is immediately made on slant agar (2*a*).

(*c*) Further dilution is now made by taking a loopful from (2) and putting it in a broth tube labelled (3).

(*d*) An immediate subculture is made from (3) into slant agar (3*a*). The tubes are then incubated at 37°c. for 24 hours.

(*e*) At the end of 24 hours several suspicious looking colonies are selected from 2*a* and 3*a* and examined in the usual way, microscopically, &c.

(*f*) Such isolated colonies are again subcultured on agar for 24 hours after which they are subjected to other tests for Cholera vibrio (q. v.)

Method B. for Isolation of Cholera Vibrio.—In this method 24 hours' old cultures are plated on petridishes and incubated at 37°c. for 24 hours. Several colonies are picked up from these and examined in the usual way.

IV.—The pure subcultures obtained by method A. are now examined as follows:—

(1) Morphology.

(2) Motility.

(3) Cholera Red Reaction—

(*a*) The introso-indol-reaction with Sulphuric acid. (This is tried in 24 and 48 hours.)

(*b*) Ehrlichs Rosindol Reaction with Paradimethylamidobenzaldehyde. (This is also tried in 24 and 48 hours.)

(4) Agglutination test. (This is tried with Serum obtained from Berne.)

(5) Staining for Flagellæ, Stephens' stain is used on a fresh subculture (under 24 hours).

(6) Pfeiffer's Reaction.

II.—*Method for examining samples of stools from Cholera Patients.*—These were either passed through peptone water and isolated on slant agar, or diluted through broth and immediately inoculated on slant agar. The rest of the method was the same as in the case of water.

The method of examining samples other than those of waters or of fæces for Cholera does not differ materially from method No. 1 (q. v.) excepting that smaller amount of peptone water is used up.

Milk for Cholera. Out of the 14 samples of milk examined for Cholera, Cholera-like vibrios were seen microscopically in only one sample which was obtained from house No. 7-13, Trinity Street.

Fish for Cholera. Six samples of fish were examined for Cholera, on account of certain cases of "Choleric diarrhœa" having occurred in the early part of January 1912 amongst some Goanese who have been eating fish. Smears and cultures were made from Guineapigs injected with 5 c. c. of a 24 hours' broth culture of fish from the following parts :—

1. Axillary and Inguinal glands.
2. Stomach.
3. Large intestines.
4. Under surface of Liver.
5. Blood from Aorta.
6. Mesenteric glands.

and were examined with negative results for Cholera vibric. In order to make sure of the results obtained here, a subculture on agar of a guineapig A, a broth culture of a guinea-pig A, an agar slope from the heart blood of guincapig D and a broth culture of guinea pig D were sent to the Director, Bombay Bacteriological Laboratory, Parel, with a request to examine for Cholera, who obtained practically the same results obtained in the Municipal Laboratory, *viz.*,—cholera vibrio was not detected.

Food-stuffs, &c., for Cholera. Four samples of sweetmeat, 3 of butter, 2 of human intestines from *post-mortem* made at Arthur Road Hospital, two of aerated waters and one of bread were examined for Cholera with negative results.

Blood for Cholera. Thirteen samples of blood were tried for Cholera agglutination test and in only one sample it was doubtful, while in the rest the results were negative.

Water for Cholera. Out of 699 samples of waters examined for Cholera (including the seven samples of Nirmal Tank obtained from Bassein in which Cholera vibrio was not detected) Cholera vibrio was detected in 26 specimens as follows :—

.....	Waters from						Total.	Remarks.
	Well.	Tank.	Storage tanks.	Tap.	Earthen pot.	Not classed.		
Positive	3	...	...	3	...	...	6	It may be mentioned that the number of samples examined, as well as the number of detections, include the repeated examinations and detections from the same source.
Seen only under Microscope ...	6	4	1	7	1	1	20	
	9	4	1	10	1	1	26	

Chemical examination of stool for mineral Poison and Cholera mixture. Besides the above, a sample of stool of a Cholera patient was examined chemically with negative results for mineral poisons. A sample of "Smith Stanistreet & Co.'s Antispasmodic Cholera Mixture" sent by the Medical Officer, Arthur Road Hospital, was also examined.

Waters for Pathogenic microbes other than Cholera. The samples examined for B. Typhosus, Gartners, and B. E. Sporogenes 266, 201, and 201, respectively, were all negative. See under Bombay Water, para. for B. Coli (Lactose fermenters.)

T. C. D. Depôt. *Central Disinfection Depot at Grant Road.*—The work at the Central Disinfection Depôt at Grant Road was continued as usual, *viz.*, that of preparing and issuing rat-poison and Mercurial Solution Jars.

Preparation of Rat-poison, &c. There was a balance of 930 tins of Rat-poison on 1st January 1912; of these, issues were made to the Health Department during the months of January and February, leaving a balance of 125 tins for March. As the poison issued in tins could not keep well and as they got deteriorated on account of climatic and other influences, it was considered advisable to discontinue the issue of poison in tins and the same was written off (*vide* Health Officer's No. 38629 of 23rd March 1912.) At present the rat-poison is issued in jars, each having a capacity of about 28 lbs. Ninety-two such jars of rat poison were prepared during the year, of which 81 jars were issued to the Health Department, leaving eleven jars of rat-poison on hand on 1st of January 1913.

417 jars of mercurial solution were prepared during the period under report, which, with the balance of 45 jars left on hand on 1st January 1912, brings the total to 462 jars of mercurial solution: of these 434 were issued to the Health Department as usual leaving a balance of 28 jars on hand on 1st of January 1913 (*vide* Appendix IX).

RESEARCH WORK.

During the period under review the following Research Work was attempted in the Municipal Laboratory.

I.—Bacteriological.

A.—Observations on the presence of Lactose-fermenting microbes in measured quantities of Bombay Waters.

B { 1. *Vitality of cholera vibrio* artificially introduced into drinking waters.
2. Bacteriological examination of fæces of cholera patients and the question of "Carriers."

II.—Chemical.

A.—Bio-chemistry.

Catalytic activity of blood, in health and disease, including observations made during the recent cholera epidemic in Bombay.

B.—Food Chemistry.

1. Analysis of cotton seed oil and "artificial ghee."
2. Analysis of certain brands of condensed milk.

I.—A.—*Observations on Lactose fermenters in the drinking waters of Bombay.*

This investigation has been undertaken since May 1912, and for the sake of completeness will be continued for a period of twelve months. It is hoped that this will serve as a basis for considering the question of local bacteriological standards. The question of coli like organisms in drinking waters and its precise significance have been matters of great controversy both in England and in India. Great diversities of opinions are expressed by prominent water Bacteriologists like Dr. Houston in England and Major Clemesha and others in India as to the strict definition of B Coli commune of Escherich. One can, however, obtain comparative results by examining waters from the same source from time to time both bacteriologically and chemically.

Method.—The samples of waters for examination are carefully collected by the Laboratory staff under aseptic precautions. Soon after collection they are brought to the Municipal Laboratory and immediately examined for Lactose-fermenters as follows:—

The culture medium used is MacConkey's Bile-Salt-Lactose-Neutral-Red broth. This is put up into Durham's fermentation tubes which have been previously sterilised at 120°C. The tubes containing different amounts of MacConkey's medium are now sterilised in the autoclave for ten minutes at 100°C on two successive days. Different quantities of the water to be examined, (usually 10cc, 5cc, 1cc, & 0·1cc), are added by means of sterilised pipettes to proportionate amounts of the medium, so that the resulting mixture would represent the normal strength of the medium used. This is placed in the incubater at 37°C for 24 and 48 hours, and the results are noted as to acid and gas formation or otherwise. The results of our investigation are appended herewith. It will be noted that most of the waters show great variation with regard to Lactose fermenters. Waters taken from three sources—(1) Tansa water from standpipe at the Junction of D'Lisle Road and Arthur Road, (2) Tansa water from 48″air valve near Chinchpogli Station and (3) Vehar water from Dongri Street standpipe, show practically the same results, *viz.*, the presence of Lactose-fermenters in 0·1cc of the samples. All these waters were examined chemically at the same time and were mostly found to be satisfactory. Both the samples of filtered waters (Vehar and Tulsi) on the whole, seem to show better results than the Tansa waters. Chemically, both the filtered waters gave almost uniformly good results. It is too early however, to draw any definite conclusions regarding the precise interpretation of the above results. As to the establishment of arbitrary standards Dr. F. Maitland Gibson of the Kings' Institute, Madras, recently said before the All India Sanitary Conference "*It is far too early to attempt to do anything of the sort.*"

OBSERVATIONS ON LACTOSE FERMENTERS IN BOMBAY WATERS DURING THE MONTHS OF MAY TO DECEMBER 1912.

Date.	Serial No.	Filtered Tulsi Water.	Lactose Fermenters in *			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1152	Filter No. 1	+	—	—	...
4th June	1219	„ „ 2	+	—	—	...
17th June	1386	„ „ 3	+	+	+	...
1st July	1534	„ „ 7	+	+	+	...
15th July	1627	„ „ 3	+	+	+	...
5th August	1819	„ „ 6	+	+	+	...
19th August ..	2023	„ „ 5	+	+	+	...
9th September ...	2172	„ „ 1	...	+	+	+
23rd September ...	2223	„ „ 7	...	+	—	—
7th October	2311	„ „ 6	...	—	—	—
22nd October ...	2451	„ „ 7	...	+	+	—
4th November ...	2552	„ „ 5	...	—	—	—
18th November ...	2649	„ „ 5	...	+	+	+
2nd December ...	2757	„ „ 5	...	—	—	—
16th December ...	2901	„ „ 3	...	+	—	—

+ = Present. — = Nil.

Date.	Serial No.	Unfiltered Tulsi Water drawn from receiving well, Malabar Hill.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1153	... ...	+	—	—	...
4th June	1218	... ...	+	+	+	...
17th June	1385	... ...	+	+	+	...
1st July	1532	... ...	+	—	—	...
15th July	1626	... ...	+	+	+	...
5th August	1818	... ...	+	+	+	...
19th August... ...	2022	... ...	+	+	+	...
9th September ...	2170	... ...	...	+	+	+
23rd September ...	2224	... ...	...	—	—	—
7th October	2310	... ...	...	+	—	—
22nd October ...	2452	... ...	...	+	—	—
4th November ...	2553	... ...	...	+	+	—
18th November ...	2647	... ...	...	+	+	+
2nd December ...	2752	... ...	...	+	+	+
16th December ...	2899	... ...	...	—	—	—

+ = Present. — = Nil.

OBSERVATIONS ON LACTOSE FERMENTERS IN BOMBAY WATERS DURING THE MONTHS OF MAY TO DECEMBER 1912—*contd.*

Date.	Serial No.	Filtered Vehar Water.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1151	Filter No. 8	+	+	—	...
4th June	1222	„ „ 8	+	+	+	...
17th June	1382	„ „ 3	+	+	+	...
1st July	1537	„ „ 5	+	+	+	...
15th July	1625	„ „ 6	+	+	+	...
5th August	1816	„ „ 8	+	+	+	...
19th August... ...	2026	„ „ 2	+	+	+	...
9th September ...	2177	„ „ 3	...	—	—	—
23rd September ...	2225	„ „ 4	...	+	+	+
7th October	2308	„ „ 5	...	+	+	+
22nd October ...	2456	„ „ 7	...	+	+	+
4th November ...	2555	„ „ 8	...	—	—	—
18th November ...	2643	„ „ 8	...	+	+	+
2nd December ...	2754	„ „ 9	...	+	+	+
16th December ...	2894	„ „ 2	...	+	—	—

+ = Present. — = Nil.

Date.	Serial No.	Unfiltered Vehar Water, drawn from the inlet channel, Bhandarwada Reservoir.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1150	... ...	—	—	—	...
4th June	1223	... ...	+	+	—	...
17th June	1381	... ...	+	+	—	...
1st July	1538	... ...	+	+	—	...
15th July	1623	... ...	+	—	—	...
5th August	1815	... ...	+	+	+	...
19th August ...	2025	... ...	+	—	—	...
9th September ...	2175	... ...	...	+	—	—
23rd September ...	2227	... ...	...	+	+	+
7th October	2307	... ...	...	+	+	+
22nd October ...	2455	... ...	...	+	—	—
4th November ...	2556	... ...	...	+	+	+
18th November ...	2642	... ...	...	+	+	+
2nd December ...	2758	... ...	...	+	+	+
16th December ...	2896	... ...	...	—	—	—

+ = Present. — = Nil.

OBSERVATIONS ON LACTOSE FERMENTERS IN BOMBAY WATERS DURING THE MONTHS OF MAY TO DECEMBER 1912—*contd.*

Date.	Serial No.	Vehar Water drawn from Public Stand-pipe at Dongri.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1149	... ...	+	+	+	...
4th June	1221	... ...	+	+	+	...
17th June	1380	... ...	+	+	+	...
1st July	1539	... ...	+	+	+	...
15th July	1624	... ...	+	+	+	...
5th August	1817	... ...	+	+	+	...
19th August... ...	2027	... ...	+	+	+	...
9th September ...	2176	... ...	+	+	+	+
23rd September ...	2226	... ...	...	+	+	+
7th October	2309	... ...	...	+	+	+
22nd October ...	2457	... ...	...	+	+	+
4th November ...	2554	... ...	...	+	+	+
18th November ...	2644	... ...	...	+	+	+
2nd December ...	2759	... ...	...	+	+	+
16th December ...	2895	... ...	...	+	+	+

+ = Present. — = Nil.

Date.	Serial No.	Tansa Water drawn from Public stand-pipe at the junction of Arthur Road and Delisle Road.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1148	... ...	+	+	+	...
4th June	1224	... ...	+	+	+	...
17th June	1383	... ...	+	+	+	...
1st July	1536	... ...	+	+	+	...
15th July	1622	... ...	+	+	+	...
5th August	1822	... ...	+	+	+	...
19th August... ...	2028	... ...	+	+	+	...
9th September ...	2173	... ...	...	+	+	+
23rd September ...	2228	... ...	...	+	+	+
7th October	2305	... ...	...	+	+	+
22nd October ...	2453	... ...	...	+	+	+
4th November ...	2550	... ...	...	+	+	+
18th November ...	2645	... ...	...	+	+	+
2nd December ...	2756	... ...	...	+	+	+
16th December ...	2897	... ...	...	+	+	+

+ = Present. — = Nil.

OBSERVATIONS ON LACTOSE FERMENTERS IN BOMBAY WATERS DURING THE MONTHS OF MAY TO DECEMBER 1912—*concld.*

Date.	Serial No.	Tansa Water drawn from 48" air valve, near Chinchpoogli Station.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1147	... ...	+	+	+	...
4th June	1225	... ...	+	+	+	...
17th June	1384	... ...	+	+	+	...
1st July	1535	... ...	+	+	+	...
15th July	1621	... ...	+	+	—	...
5th August	1821	... ...	+	+	+	...
19th August... ...	2029	... ...	+	+	+	...
9th September ...	2174	... ...	...	+	+	+
23rd September ...	2229	... ...	...	+	+	+
7th October	2304	... ...	...	+	+	+
22nd October ...	2454	... ...	...	+	+	+
4th November ...	2549	... ...	...	+	+	+
18th November ...	2646	... ...	...	+	+	+
2nd December ...	2755	... ...	...	+	+	+
16th December ...	2898	... ...	...	+	+	+

+ = Present. — = Nil.

Date.	Serial No.	Mixed Tulsi filtered and Tansa unfiltered water.	Lactose Fermenters in			
			10 C. C.	5 C. C.	1 C. C.	0·1 C. C.
1912.						
20th May	1154	... ...	+	+	+	...
4th June	1220	... ...	+	+	+	...
17th June	1387	... ...	+	+	+	...
1st July	1533	... ...	+	+	+	...
15th July	1628	... ...	+	+	+	...
5th August	1820	... ...	+	+	+	...
19th August... ...	2024	... ...	+	+	+	...
9th September ...	2171	... ...	...	+	+	+
23rd September ...	2222	... ...	...	+	+	+
7th October	2306	... ...	...	+	+	+
22nd October ...	2450	... ...	...	+	+	—
4th November ...	2551	... ...	...	+	+	+
18th November ...	2648	... ...	...	+	+	+
2nd December ...	2753	... ...	...	+	+	+
16th December ...	2900	... ...	...	+	+	—

+ = Present. — = Nil.

B.—*Cholera.*—1. *The vitality of Cholera Vibrio in Water.*

With a view of finding out the vitality of cholera vibrio in ordinary tap water, and also in sterile tap water, a series of experiments were undertaken, the results of which are tabulated below (Tables I, II & III):—

TABLE No. 1.—The vitality of cholera vibrio isolated from the fæces of cholera patients (Arthur Road Hospital) in artificially infected samples of Laboratory tap water.

Date.	Experiment.	Volume of Laboratory Tap Water.	Age of Cholera culture used.	Strain of Cholera used.		Results as regards isolation of cholera vibrio from the infected Laboratory tap water.
				Serial No.	Patients No.	
21st August 1912.	1	90 cc.	24 hours.	1959	1289 convalescent.	Positive after 24 hours.
Do. ...	2	„ „	„	„	„	Negative after 8 days
Do. ...	3	„ „	„	1986	1299 convalescent.	Positive after 24 hours.
Do. ...	4	„ „	„	„	„	Negative after 8 days.
Do. ...	5	„ „	3 Days.	2080	1350	Do. 2 days.
Do. ...	6	„ „	„	„	„	Do. 4 days.
Do. ...	7	„ „	„	2081	1351	Do. 2 days.*
Do. ...	8	„ „	„	„	„	Do. 2 days.

*In this case a culture resembling cholera by physical appearance on agar was obtained but to further tests it was found negative.
Microscopic examination showed somewhat curved but thick bacillus.

TABLE No. 2.—The vitality of cholera vibrio isolated from the fæces of cholera patients (Arthur Road Hospital) in artificially infected samples of Laboratory tap water:—

Date.	Experiment.	Volume of Laboratory Tap Water.	Age of Cholera culture used.	Strain of Cholera used.		Results as to presence of comma bacilli microscopically.
				Serial No.	Patients No.	
1912.						
23rd September...	1	90 cc.	24 hours.	2080	1350	Positive after 48 hours.†
„ ...	2	„	„	2081	1351	„ 48 hours.†
24th September...	3	„	„	2080	1350	„ 72 hours.†
„ ...	4	„	„	2081	1351	„ 72 hours.†
25th September...	5	„	„	2080	1350	„ 96 hours.†
„ ...	6	„	„	2081	1351	„ 96 hours.†
26th September...	7	„	„	2080	1350	Negative after 5 days.
„ ...	8	„	„	2081	1351	„ „ 5 „
27th September...	9	„	„	2080	1350	„ „ 6 „
„ ...	10	„	„	2081	1351	„ „ 6 „

† A pure culture obtained.

TABLE No. 3.—The vitality of cholera vibrio isolated from the fæces of cholera patients (Arthur Road Hospital) in artificially infected samples of sterile tap water.

Date.	Volume of sterile tap-water.	Age of the Cholera culture used.	Experiment.	Strain of Cholera used.		Results as regards isolation.
				Serial No.	Patients No.	
21st August 1912.	20 cc.	24 hours.	1	1959	1289	Positive upto 45th day.
„ ...	„	„	2	1986	1299	„ „ „
31st August 1912.		3 days.	3	2080	1350	„ „ 35th day.
„ ...	„	„	4	2081	1351	„ „ „

It will be seen that 90 c.c. of tap-water were infected with different strains of Cholera vibrio isolated from the stools of Cholera patients and an attempt was made to isolate the vibrios on different days. It was found that in the case of ordinary tap-waters they could be isolated in pure culture up to the fourth day after which they could not be traced any further. On the other hand, in samples of sterile tap-waters infected artificially with cholera vibrios, a pure culture of cholera vibrio could be obtained up to the 45th day. It would appear from these experiments that the growth of Cholera vibrio in the ordinary drinking water of Bombay is inhabited within a very short time, or in other words, the vibrio seem to disappear after the 4th day, while in the same water when previously *sterilised* the vibrio can grow at least up to the 45th day. This may be due to the presence in the former (ordinary tap-water) of different microbes, *e.g.*, Lactose fermenters, etc., which may be detrimental to the growth of the Cholera vibrio. In the case of sterile tap-water, however, the cholera vibrio, not having to contend against any hostile organism seems to retain its vitality for a very long time. Further observations are necessary before drawing any final conclusions.

2. *Effect of the Direct Rays of the Sun on the vitality of Cholera Vibrio.*

Method.—One loopful of a 24 to 72 hours growth of Cholera vibrio on slant agar was added to sterile tap-water in a wide test tube. The tube was then exposed to the sun for a definite amount of time and then a sub-culture was made from the waters and tested in the usual way for Cholera. The depth of the water as well as its temperature was noted in each case. The results are tabulated below:—

Experiment No.	No. of strain used.	Age of culture used.	Diam. of tube.	Depth of water in tube.	Temperature of water.	Time of exposure.	Remarks as to vitality of Cholera vibrio.
1	2080/12	72 hours	1″	5″	43°C to 45°C	3 hours	Cholera vibrio killed.
2	,,	,,	,,	4″	39°C to 40°C	2 hours	Do.
3	,,	,,	,,	,,	,,	1½ hour	do.
4	126/13	24 hours	,,	,,	40°C	,,	do.
5	,,	,,	,,	,,	38°C	1 hour	do.
6	,,	,,	,,	,,	37°C	45 minutes	do.
7	,,	,,	,,	,,	35°C	30 minutes	do.
8	,,	,,	,,	,,	35°C	25 minutes	Growth of Cholera vibrio.

Bacteriological Examination of stools of Cholera patients (vide Appendix VIII).

This was done systematically with two objects in view:—

(1) To confirm the clinical diagnosis of cholera.

(2) To find out whether convalescent cholera patients act as "carriers" of the disease.

The total number of stools examined during the period under review was 87. Out of these 26 samples gave positive test for Cholera vibrio culturally and biologically (agglutination); in 18 samples, comma-like bacilli were seen microscopically, but cultural and biological (agglutination) tests were negative for Cholera vibrio: the remaining samples did not either give any positive tests for Cholera vibrio nor were any cholera-like organisms detected microscopically.

For method used for the isolation of Cholera vibrio from stools, *vide* para. on Cholera on page 59.

For the purpose of rapid diagnosis during an epidemic, the following tests were considered quite sufficient to prove the presence of Cholera vibrio.

1. Comma-shaped bacilli or vibrios microscopically in a stained smear.

2. Cholera red reaction in 24 and 48 hours.

3. Agglutination with a standard serum—both microscopic and macroscopic. The serum used in the beginning of the present investigation was from the Parel Laboratory; the serum we have been using recently is the one prepared by the Swiss Serum and Vaccine Institute, Berne, under the supervision of Prof. Kolle. The latter serum usually gave positive agglutination with Cholera vibrio in a dilution of 1 : 1,000.

"*Carriers.*"—In order to find out whether any of the convalescent Cholera patients could act as "carriers" of the disease, 23 samples of fæces from convalescents were examined. In 2 cases Cholera vibrio were detected and isolated, 14th day being the longest period during which we were able to find Cholera vibrio in convalescents. Further observations could not be made as the patients were discharged from the Hospital. It is quite likely however that some of the Cholera convalescents act as "carriers" for a much longer period.

II.—*Chemical Research.*

A Catalytic Activity of Blood in health and disease, including observations made during the recent Cholera epidemic in Bombay.

As a separate paper was read on this subject before the Bombay Presidency Science Association, only a very brief summary can be given here. So far as I am aware, this is the first time that such an investigation has been undertaken by any one in India.

Among the many Enzymes recognized in blood are the "catalases" or the catalytic ferments. They are of universal occurrence in nature and have the property of liberating oxygen from hydrogen peroxide. Advantage is taken of this in the laboratory for the quantitative estimation of the catalytic activity of blood in health and disease.

Method.—A special apparatus is used for this purpose. 20 mm of blood are taken under aseptic precautions by means of a capillary pipette. This is immediately diluted with 10cc. of distilled water in a small beaker. 5 cc. of this mixture is now removed by means of a pipette and placed in a wide-mouthed bottle. 5 cc. of neutral hydrogen peroxide is then taken in a small tube which is now placed in the bottle containing the diluted blood. The bottle is connected with a gas burette and shaken uniformly, so as to bring the two liquids into intimate contact. The amount of oxygen liberated in 15 seconds and more is then accurately measured, and the results are stated in cubic centimeters. This method can be easily applied at the bed side of patients and takes only a few minutes for the manipulations. Besides the amount of blood needed for the test is very small, only a drop or two being required.

The result of our investigation may be summed up as follows:—

I.—*Catalytic activity of Blood in Health.*

This varies according to several factors, *e.g.*, age, sex, diet, exercise, season and climate. Women and female animals show a smaller amount than men and male animals. The average for sixty normal individuals, (including Clerks, Laboratory Assistants, and Medical Students) was found to be 9·85 cc. in 15 seconds.

II.—*Catalytic activity of Blood in Disease.*

1). *Anemia.*—In 25 cases of Anemia (including those of Malaria), the reading was found to be very low.

(2). *Phthisis.*—In 20 cases of Pulmonary Tuberculosis, it was found to be under 5cc.

(3). *Plague.*—In 5 cases of Plague it showed an increase.

(4). *Cholera.*—During the recent Cholera epidemic in Bombay we examined the blood of about 50 patients at the Arthur Road Hospital. The results are tabulated below:—

CATALYTIC ACTIVITY OF THE BLOOD IN CHOLERA CASES FROM ARTHUR ROAD HOSPITAL. EXAMINED DURING MAY AND JUNE 1912.

General No.	Date of admission.	Day of the disease when blood was examined.	Age.	Caste.	Catalytic Activity Seconds.				Remarks.
					15 s.	30 s.	45 s.	1. m.	
	1912.								
873	21st May ...	4th	...	.....	11·6	17·8	...	...	Discharged.
855	17th May ...	8th	...	.....	6·8	9·2	...	...	Do.
866	19th May ...	4th	...	.....	9·6	14·5	...	...	Died.
854	17th May ...	9th	...	.....	...	...	...	...	Discharged.
902	28th May ...	5th	13	.....	6·8	10	12·6	14·8	Do.
899	28th May ...	6th	20	.....	12	17·8	23	25·8	Died.
949	11th June ...	2nd	32	Mahomedan ...	10·4	15·	18·6	21·2	Discharged.
954	11th June ...	3rd	25	Hindoo ...	10·7	19	23·2	27·2	Do.
948	11th June ...	3rd	25	Hindoo ...	17·	24·	28·4	33·2	Do.
958	11th June ...	3rd	50	Do. ...	15·4	21·8	27·	31·2	Died.
955	11th June ...	3rd	35	Do. ...	15·6	22·6	27·2	32·	Discharged.
950	11th June ...	4th	25	Maratha ...	7·2	70·8	13·4	16·4	Died.
960	11th June ...	3rd	20	Mahomedan ...	17·4	24·6	29·4	34·6	Do.
956	11th June ...	2nd	30	Hindoo ...	9·6	14·4	17·8	21·4	Discharged.
1006	14th June ...	5th	...	Musalman ...	17·	24·	31·	36·2	Died.
1022	15th June ...	2nd	...	Do. ...	10·2	16·6	22·	27·4	Discharged.
999	14th June ...	4th	...	Do. ...	11·2	15·4	20·2	24·4	Died.
1003	14th June ...	4th	...	Hindoo ...	12·	17·8	22·6	26·2	Do.
1015	15th June ...	5th	...	Do. ...	15·	21·4	26·8	31·2	Do.
1027	15th June ...	4th	...	Do. ...	...	...	...	...	Do.
1021	15th June ...	2nd	...	Musulman ...	17·2	24·8	28·2	34·	Discharged.
1028	15th June ...	2nd	...	Do. ...	16·	23·2	28·	32·2	Died.
1024	15th June ...	5th	...	Hindoo ...	14·4	19·2	24·6	34·6	Do.
1074	18th June ...	5th	13	Maratha ...	10·4	16·8	22·4	26·	Do.
1064	17th June ...	5th	19	Christian ...	10·2	16·	20·8	25·2	Discharged.
1047	16th June ...	7th	45	Musalman ...	11·6	18·	25·2	29·6	Died.
1083	19th June ...	2nd	30	Christian ...	14·4	20·6	27·	33·6	Discharged.
1081	19th June ...	4th	25	Hindoo ...	15·4	21·8	29·4	34·6	Do.
1015	15th June ...	9th	35	Do. ...	13·6	22·	29·4	35·4	Died.
1080	18th June ...	3rd	20	Musalman ...	13·4	20·2	28·	34·	Discharged.
1024	15th June ...	9th	20	Hindoo ...	15·2	21·6	31·4	38·	Died.
1051	17th June ...	4th	50	Musalman ...	16·2	25·6	34·	40·2	Do.
1018	15th June ...	8th	20	Hindoo ...	15·4	24·4	30·2	35·	Do.
1034	16th June ...	6th	35	Christian ...	13·4	21·	28·2	33·6	Do.
1076	18th June ...	4th	35	Hindoo ...	16·2	25·8	34·6	42·4	Do.
1022	15th June ...	9th	...	Musalman ...	8·2	11·6	15·	17·6	Discharged.
1103	21st June ...	11th	30	Maratha ...	14·4	23·	30·6	37·8	Died.
1083	19th June ...	5th	30	Christian ...	13·6	22·	27·	33·	Discharged.
1081	19th June ...	7th	25	Hindoo ...	13·8	23·6	31·2	37·	Do.
1015	15th June ...	12th	35	Do. ...	9·4	16·2	22·	26·8	Living.
1064	17th June ...	8th	19	Christian ...	16·2	25·6	33·6	39·	Discharged.
1107	22nd June ...	.....	27	Hindoo ...	17·2	27·8	35·2	40·6	Died.
1094	21st June ...	3rd	18	Musalman ...	15·4	24·2	34·2	40·	Discharged.
1093	21st June ...	3rd	40	Do. ...	12·4	20·6	25·	30·8	Died.
1108	22nd June ...	2nd	40	Hindoo ...	14·6	23·	29·2	33·8	Do.
1047	16th June ...	9th	45	Musalman ...	12·8	22·2	30·	35·6	Discharged.
1076	18th June ...	7th	35	Hindoo ...	17·	26·8	33·8	38·6	Died.

Our observations are somewhat limited, for most of the patients seek admission to the Hospital after the disease is well developed, and in some cases they are already in a moribund condition. Soon after admission about 3 pints of saline solution were injected per rectum, and the blood was examined by us several hours after such an injection.

The highest reading in 15 seconds was found to be 17·2c.c. (case No. 1107). The highest reading in 60 seconds was found to be 42·4 c.c. (case No. 1076). Both these patients died subsequently. Cases Nos. 1015, 1081 and 1083 are illustrative of the relation of the catalytic activity of blood to prognosis. They also show that the catalytic activity is greatest at the beginning of the disease and gradually falls as the symptoms ameliorate until during convalescence it drops to the normal. It may be fair to infer from our investigations the following general conclusions:—

(1.) The catalytic activity of blood is increased in most cases of cholera.

(2.) It reaches its height in the early stage of the disease and in favourable cases, it gradually falls until it reaches the normal during convalescence.

(3.) In fatal cases it maintains a high level throughout.

4. When the catalytic activity of blood in a cholera patient is very high, the prognosis in most cases is bad and in some cases fatal.

5. Conversely, when the catalytic activity gives a low reading, the prognosis is usually favourable and most of such patients recover under proper treatment.

The injections of saline solutions in cholera cases is now followed as a routine treatment. The effect of saline injections on the catalytic activity of blood was studied experimentally in the laboratory; and it was found that in the case of rabbits the immediate effect of intravenous saline injection is to lower the catalytic activity of blood. The lowering of the catalytic activity of blood means clinically a favourable prognosis as seen in about 50 cholera cases examined at the Arthur Road Hospital.

B.—Research in Food Chemistry.

Cotton-Seed Oil.

1. Analysis of cotton seed oil and artificial "ghee."

19 samples of the former and only 2 samples of the latter were examined. Out of the 19 samples of cotton seed oil examined, seven were found to be genuine and in good condition, two good but rancid, and two good but old and stale, although genuine in composition, five fair and three below standard.

As to "artificial ghee," 2 samples only were examined and were found to be not genuine for ghee. In this connection a sample of "albene" or "vegetable ghee" was also examined and from the results obtained, it could be seen that this sample of "albene" was quite different from that of a genuine sample of ghee.

Condensed Milk.

2. Analysis of certain brands of condensed milk.

Seven different brands of condensed milk samples were examined chemically with the following results, but none of them could be said strictly to conform to the standards laid down for them :—

	Pigeon Brand.	Crown Brand.	Shepherd Brand.	Parrot Brand.	Axe brand Skimmed.	Anchor skin.	Nestle's whole condensed milk.
Total Solids ... per cent.	76·7	88·58	87·96	78·7	84·92	90·82	90·36
Fat (Adams' method Soxhlet apparatus). ,,	2·0	7·4	11·0	2·0	1·6	9·6	10·2
Solids not fat ... ,,	74·7	76·18	76·96	76·7	83·32	81·22	80·16
Ash ... ... ,,	1·22	1·48	3·8	1·86	2·1	2·24	2·04

The figures are those for undiluted condensed milk. 10 grams of samples were taken and made up to 100 c.c. with distilled water. This gives 10 per cent. solution. The results were calculated for undiluted milk.

In conclusion, it may be noted that the work in the Bombay Municipal Laboratroy has been steadily increasing particularly during the last four years. In the Annual Report for 1911-12 of the Calcutta Corporation, it is stated that the total analytical work done in the Calcutta Municipal Laboratory during the year amounted to 2,095 samples, whereas, the total number of samples examined at this Laboratory during 1912 amounted to 5,625. The total number of water samples examined in Calcutta was 238, whereas the number of samples of waters examined here was 866 chemically and 1,745 bacteriologically.

Staff.

The work of the Laboratory Staff during the year was very satisfactory. Mention must be made particularly of the excellent work done by the Laboratory Assistants, Messrs. Gupte and Pansare.

I have the honour to be,

Sir,

Your most obedient servant,

LEMUEL LUCAS JOSHI, M.D., B.Sc., D.T.M.,

Municipal Analyst.

N. B.—with nine Statements (Appendix I—IX).

APPENDIX I.

STATEMENT SHOWING THE NUMBER OF ARTICLES EXAMINED CHEMICALLY DURING THE YEAR 1912 IN THE MUNICIPAL LABORATORY.

Received from	Well Water.	Tank Water.	Water.	Storage Tank Water.	Aerated Waters.	Bombay Water with Powai Lake Water.	Sea Water.	Mud.	Milk.	Butter.	Ghee.	Curds.	Oil.	Condensed Milk.	Fat.	Albene.	Imitation Ghee.	Fat Preparation.	Tallow.	Cotton Seed Oil.	Liquid Substances.	Vinegar.	Tea.	Coffee.	Bread.	Flour.	Soap.	Substance used in the preparation of sizing Materials.	Sweetmeats for mineral poison.	Sulphur.	Hydrochloric Acid.	Mercury Solution.	K. M. N. 04 Solution.	Lime.	Mortar.	Stool for Mineral poisons.	Cholera Mixture.	Yellow shining crystals.	Urine.	Total.
Executive Health Officer	..	..	..	..	1	..	..	1	1	1	..	..	..	9	1	1	..	..	..	1	..	..	..	..	..	..	..	1	..	3	1	..	6	1	1	1	..	..	..	29
M. O. Arthur Road Hospital	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	3
Dy. Health officer A	140	..	..	1	..	1	..	..	..	..	..	..	3	..	..	..	..	..	..	4	..	..	5	5	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	189
,, B	122	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	3	..	30	..	..	..	..	..	1	..	..	..	..	..	..	..	..	160
,, C	144	..	..	..	..	..	..	..	3	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	159
,, D	93	8	..	1	4	..	..	..	4	2	2	..	1	..	..	..	..	..	..	3	..	..	..	..	1	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	117
,, E	57	2	..	1	1	..	..	..	..	1	2	2	1	..	..	..	1	1	..	1	..	..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	74
,, F	7	..	..	..	1	1	..	..	..	1	3	..	3	..	3	..	..	..	..	3	..	2	7	4	3	16	1	..	..	..	..	..	..	..	..	..	..	..	1	..	56
,, G	6	1	..	..	1	..	..	..	..	..	3	..	3	..	..	..	..	..	..	3	..	1	5	5	4	15	1	..	..	..	..	..	..	..	..	..	..	..	..	..	48
Muncl. Storekeeper	..	..	..	..	..	..	..	..	..	..	..	..	36	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	36
License Superintendent	..	..	..	..	..	..	..	..	..	..	..	..	1	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9
Rev. and Refd. Account Officer	..	..	..	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Muncl. Analyst and Hydraulic Engineer ..	..	..	..	..	..	274	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	278
Private	1	..	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	.	470	477
	570	6	2	3	8	277	1	1	9	5	11	2	55	9	11	1	2	1	1	19	1	3	19	17	9	98	4	1	1	3	1	1	6	3	2	2	1	1	470	1,636

APPENDIX II.

STATEMENT SHOWING THE NUMBER OF MILK SAMPLES EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Received from	Genuine.	Not genuine.	Total.
Executive Health Officer	1	...	1
Medical Officer, Arthur Road Hospital ...	1	...	1
Dy. Health Officer, C.	3	...	3
Do. D.	4	...	4
Total	9	...	9

APPENDIX III.

STATEMENT SHOWING THE NUMBER OF GHEE SAMPLES EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Received from	Genuine.	Fair.	Ordinary.	Total.
Deputy Health Officer, C	...	1	...	1
Do. D	...	1	1	2
Do. E	...	2	...	2
Do F	1	2	...	3
Do. G	...	3	...	3
Total ...	1	9	1	11

APPENDIX **IV**.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
1	Deputy Health Officer, C Ward	2nd Sonapur Street	Unfit.
2	Do. do. D do.	16, Warden Road	Unfit.
3	Do. do. D do.	4, Babulnath	Very suspicious.
4	Do. do. C do.	4, IV Marine Street	Fit.
5	Do. do. E do.	North at No. 30—30 A, Mazagon Road	Fit.
6	Do. do. E do.	West at do. do. do. do.	Suspicious.
7	Do. do. E do.	1, Victoria Road	Unfit.
8	Do. do. E do.	8, at 11 & 13 at 15 Parel Road	Unfit.
9	Do. do. C do	48, Girgaum Back Road	Objectionable.
10	Do. do. C do.	10, Sonapur Street	Unfit.
11	Do. do. B do.	66—70, Samuel Street	Unfit.
12	Do. do. B do.	59—63, Samuel Street	Unfit.
13	Do. do. E do.	12, Nesbit Road	Unfit.
14	Do. do. E do,	1—3, Love Lane Cross	Unfit.
15	Do do. D do.	30—32, Nepean Sea Road	Unfit.
16	Do. do. E do.	6, Mazagon Road	Unfit.
17	Do. do. C do.	245—249, Girgaum Road	Objectionable.
18	Do. do. F do.	Behind Batliwalla's Bungalow on Sopari Bag Road No. 2 B, Owner's Saraswati Mills	Unfit.
19	Do. do. C do.	200, Girgaum Road	Unfit.
20	Do. do. E do.	13, Mount Road	Very suspicious.
21	Do. do. E do.	42—52, Matharpakhadi	Unfit.
22	Do. do. C do.	126-128, Fanaswadi in north-west corner of Vadi.	Unfit.
23	Do. do. B do.	109—111, Parel Road	Unfit.
24	Do. do. B do.	9—11, Sutarchall Street	Unfit.
25	Do. do. C do.	126—128 Fanaswadi Lane	Unfit.
26	Do. do. B do.	18—19, Mirchi Street	Unfit.
27	Do. do. E do.	2—8, D'Lima Street	Suspicious.
28	Do. do. E do.	1—3, Ghorapdeo Road	Unfit.
29	Do. do. C do.	5, New Vadi	Fair.
30	Do. do. E do.	59, Dockyard	Unfit.
31	Do. do. E do.	2, Ripon Road	Unfit.
32	Do. do. D do.	8, 2nd Parsee Wada	Unfit.
33	Do. do. C do.	111, Girgaum Road	Very suspicious.
34	Do. do. E do.	3, Hanaraj Lanes	Unfit.
35	Do. do. C do.	111, Girgaum Road	Fit.
36	Do. do. C do.	149, Do.	Objectionable.
37	Do. do. C do.	214, Do.	Unfit.
38	Do. do. B do.	39—41, 2nd Agiary Cross Lane	Objectionable.
39	Do. do. C do.	137, Girgaum Road	Fit.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
40	Deputy Health Officer, C Ward ...	91, Sonapur Street	Unfit.
41	Do. do. B do. ...	10—14, Ovalwadi, Pydhowni	
42	Do. do. B do. ...	62—66, Vithalwadi	Unfit.
43	Do. do. C do. ...	61, I, Carpenter Street	
44	Do. do. C do. ...	9, Panchayet Wadi	
45	Do. do. C do. ...	190, Girgaum Road	
46	Do. do. C do. ...	111, Do.	
47	Do. do. E do. ...	284A—286, Haines Road	
48	Do. do. E do. ...	25, I Parel Road, Kambatha Lane	
49	Do. do. E do. ...	18—122, Arthur Road	
50	Do. do. F do. ...	Behind Dr. Batliwala's Bungalow	Very suspicious.
51	Do. do. D do. ...	8, 2nd Parsiwada	Unfit.
52	Do. do. D do. ...	4, Babulnath Road	
53	Do. do. B do. ...	327—329, Kalbadevi Road	Objectionable.
54	Do. do. B do. ...	225—227 do.	Unfit.
55	Do. do. D do. ...	530, Tardeo Road	
56	Do. do. B do. ...	111—115, Champawadi Cross Lane.	Suitable.
57	Do. do. B do. ...	58—60, Vithalvadi	
58	Do. do. D do. ...	20—21, Bhatvadi, II Lane	Unfit.
59	Do. do. B do. ...	39—41, 2nd Agiari Cross Lane	Objectionable.
60	Do. do. B do. ...	24-26, Vithoba Lane	Fair.
61	Do. do. B do. ...	12-16, Kambekar Street	Unfit.
62	Do. do. B do. ...	279, Kalbadevi Road	Objectionable.
63	Do. do. B do. ...	30-32, Samuel Street	
64	Do. do. B do. ...	85-87, Champavadi...	Fair.
65	Do. do. C do. ...	119, Girgaum Road	Fit.
66	Do. do. C do. ...	36, Kolbhat Street	Objectionable.
67	Do. do. B do. ...	2, Mazagon Road	Unfit.
68	Do. do. B do. ...	4, Mirza Alikhan Street	
69	Do. do. B do. ...	72-74, Dhanji Street	
70	Do. do. B do. ...	123, Chakla Street	
71	Do. do. B do. ...	West of 12 Hari Joshi Wadi	Objectionable.
72	Do. do. B do. ...	East Do.	Unfit.
73	Do. do. B do. ...	In the centre of Mulji Jetha Market, Shaik Meman Street	Suitable.
74	Do. do. B do. ...	Well at south of Moolji Jetha Market, Shaik Memon Street	Objectionable.
75	Do. do. D do. ...	27, Benham Hall Lane	Suitable.
76	Do do. F do. ...	From compound of Messrs. Merwanji Bana and Dadachanji, Bhoiwada Cross Road	Unfit.
77	Do. do. F do. ...	17, Elphinstone Road	
78	Do. do. B do. ...	31-33, Dhanji Street	Objectionable.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
79	Deputy Health Officer, B Ward ...	38-40, 1st Cross Lane, Old Hanuman Lane ...	
80	Do. do. E do. ...	135-137, Foras Road	
81	Do. do. D do. ...	117-119, Khetwadi Back Road	
82	Do. do. C do. ...	201-203, Bhuleshwar Road...	Unfit.
83	Do. do. C do. ...	198, Kika Street	
84	Do. do. C do. ...	10, 2nd Bhoiwada	
85	Do. do. C do. ...	7, Khanderaowadi	
86	Do. do. B do. ...	225-27, Kalbadevi Road	Fair.
87	Do. do. F do. ...	138, Bhoiwada Road	Unfit.
88	Do. do. D do. ...	523, Girgaum Road	
89	Do. do. C do. ...	366-68, Lohar Street	Suspicious.
90	Do. do. E do. ...	5-20, Tardeo Road...	
91	Do. do. D do. ...	16, 1st Lane, Bhatwadi	
92	Do. do. D do. ...	1, Gamdevi Road	
93	Do. do. D do. ...	5-20, Tardeo Road, corner of middle compound...	
94	Do. do. C do. ...	102, Kalbadevi Road	
95	Do. do. C do. ...	90-92, Nizam Street...	
96	Do. do. B do. ...	464-468, Shaik Memon Street	Unfit.
97	Do. do. C do. ...	10, Ropa Lane	
98	Do. do. D do. ...	140 (3), Thakurdwar Road...	
99	Do. do. B do. ...	10-11, Takwadi	
100	Do. do. C do. ...	65, 1st Carpenter Street	
101	Do. do. C do. ...	368-370, Lohar Street	
102	Do. do. C do. ...	134-136, Girgaum Road	
103	Do. do. B do. ...	379-380, Kalbadevi Road	
104	Do. do. B do. ...	106-112, Old Hanuman Lane	Objectionable.
105	Do. do. B do. ...	132-136, Do.	Unfit.
106	Do. do. B do. ...	1-3, 2nd Agiari Cross Lane	
107	Do. do. B do. ...	275-277, Bazar Gate Street...	Objectionable.
108	Do. do. C do. ...	35, Mahadeo Shanker Street Lane	
109	Do. do. C do. ...	364-3656, Lohar Street	Unfit.
110	Do. do. D do. ...	79 (216), Charni Road	
111	Do. do. C do. ...	146, Cavel	Suspicious.
112	Do. do. A do. ...	60-62, Homji Street...	
113	Do. do. D do. ...	573-575, Girgaum Road	
114	Do. do. D do. ...	52-54, Tardeo Road	
115	Do. do. C do. ...	206, Girgaum Road...	Unfit.
116	Do. do. C do. ...	11, Ropa Lane	
117	Do. do. C do. ...	Mooljibhai Mahavdas Dharamshalla, C. P. Tank Road	
118	Do. do. E do. ...	1, Gilder Cross Lane, Poor Parsi Chawl ...	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
119	Deputy Health Officer, C Ward	8, Islampura Street	Unfit.
120	Do. do. B do.	253-257, Nagdevi Street	
121	Do. do. B do.	South of 343-347, Abdul Rahiman Street	
122	Do. do. B do.	North of 343-347, Do.	
123	Do. do. A do.	193-199, Modi Street	
124	Do. do. C do.	77, Girgaum Back Road	
125	Do. do. B do.	54-104, Shaik Meman Street	
126	Do. do. D do.	2-4, Harkness Road	
127	Do. do. C do.	15, Burrows Lane	
128	Do. do. C do.	124, Dadiset Agiari Street	
129	Malaria Inspector, B do.	11, Popatvadi	No opinion given.
130	Deputy Health Officer, D do.	92 (4), Thakurdwar Road (Vaidya's Wadi)	Unfit.
131	Do. do. D do.	92 (2), Do.	Objectionable.
132	Do. do. E do.	2 A, Tank Bunder Road	Unfit.
133	Do. do. F do.	In front of house No. 2 A	
134	Malaria Inspector, C do.	331-333, Kalbadevi Road	Opinion not given.
135	Do. do. C do.	261, Girgaum Road	Unfit.
136	Deputy Health Officer, D do.	219-221, Girgaum Back Road	
137	Do. do.	25, Warden Road	
138	Do. do. G Ward	Close to Mahadeo Temple, 358, Mahim Custom Road.	
139	Do. do. G do.	360, Mahim Custom Road	
140	Malaria Inspector, C do.	177-181, Girgaum Road	
141	Deputy Health Officer, D do.	479, Walkeshwar Road	
142	Malaria Inspector, B do.	241-243, Kalbadevi Road	Objectionable.
143	Do. do.	8-10, Dhanji Street	Unfit.
144	Do. do.	145-147, New Hanuman Lane	
145	Do. do. E Ward	10, Love Lane	
146	Do. do. E do.	Bomanji Petit Mill Clerk Road	
147	Do. do. C do.	21, 2nd Popat Wadi	
148	Do. do. C do.	1, Mahlar Rao Vadi	
149	Do. do. B do.	88-90, Kazi Sayad Street	
150	Do. do. B do.	197-201, Memanwada Road	
151	Do. do. D do.	38-44, Khota's Vadi, Girgaum	
152	Do. do. D do.	37, Banganga	
153	Deputy Health Officer, A do.	27, Ghoga Street	Fair.
154	Malaria Inspector, C do.	552, Parel Road inside house	Unfit.
155	Do. do.	15, Parsi Agiari Street, Parel Road	
156	Do. do.	546, Parel Road	
157	Do. do. A Ward	22 A, Frere Road	
158	Deputy Health Officer, A do.	18, Homji Street	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
159	Deputy Health Officer, D Ward ...	45-47, Warden Road	Fair.
160	Malaria Inspector, A do. ...	Parsee Bazar, No. 78	Unfit.
161	Do. do. A do. ...	3-B, Kittredge Road, Colaba	
162	Do. do. ...	27-29, Parsee Panchayat Lane	
163	Do. do. C Ward ...	54-58, 3rd Marine Street	
164	Do. do. C do. ...	52, 4th Marine Street	
165	Deputy Health Officer, D do. ...	12, Mugbhat Cross Lane	
166	Do. do. D do. ...	55, Do.	
167	Malaria Inspector, A do. ...	Joint well of No. 54 C. P. Street and 23-25, Gogha Street.	Objectionable.
168	Do. do. C do. ...	16, Chewoolwadi	Unfit.
169	Do. do. C do. ...	Bhangwadi	
170	Do. do. A do. ...	32, Frere Road	
171	Do. do. D do. ...	310, Grant Road	
172	Do. do. C do. ...	Ardeshir Dadi Cross Lane, No. 6	
173	Do. do. C do. ...	Do. Street No. 7...	
174	Do. do. A do. ...	Bazaar Gate Street, No. 103	
175	Do. do. C do. ...	No. 2, C. P. Tank Road	Objectionable.
176	Do. do. A do. ...	132-34 and 36, Cowasji Patel Street	Fit.
177	Do. do. B do. ...	165-67, Kalbadevi Road	Objectionable.
178	Do. do. B do. ...	44-46, Old Hanuman, 1st Cross Lane	Fit.
179	Deputy Health Officer, D do. ...	20-21, Borbhat Lane	Objectionable.
180	Malaria Inspector, B do. ...	331-333, Kalbadevi Road	Unfit.
181	Do. do. B do. ...	446-450, Shaik Memon Street	Objectionable.
182	Do. do. D do. ...	154-156, Thakurdwar Road...	Unfit.
183	Do. do. D do. ...	42, Mugbhat Cross Lane	Objectionable.
184	Do. do. C do. ...	43, 3rd Marine Street	Unfit.
185	Do. do. C do. ...	48-50, 4th Do.	Objectionable.
186	Do. do. C do. ...	100, Sonapur Street	Unfit.
187	Do. do. C do. ...	2, Ropa Lane	
188	Do. do. A do. ...	2-6, Bell Lane	Suspicious.
189	Do. do. A do. ...	Saboo Sidik's New Musapherkhana, Carnac Road	Unfit.
190	Do. do. E do. ...	10, Love Lane to the North	
191	Do. do. E do. ...	24, Nesbit Road	
192	Do. do. A do. ...	45-47, Hornby Road	Fit.
193	Do. do. ...	373, Colaba Road	
194	Do. do. D Ward ...	6, Girgaum Road	Unfit.
195	Do. do. C do. ...	3, 2nd Popatwadi	
196	Do. do. C do. ...	1-4, Panjrapole Road	Objectionable.
197	Do. do. D do. ...	504-504A, Tardeo Road	Unfit.
198	Do. do. E do. ...	Opposite London Hotel, Grant Road	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
199	Malarial Inspector, E Ward ...	441, Falkland Road...	Very suspicious.
200	Do. do. A do. ..	110, Cawasji Patel Street	Fit.
201	Do. do. A do. ...	112, Do.	Unfit.
202	Do. do. B do. ...	29-31, Champawadi	Objectionable.
203	Do. do. B do. ...	33, 30, Old Hanuman I Cross Gully	Unfit.
204	Do. do. A do. ...	9-11, Gogha Street	
205	Do. do. A do. ...	117-119, Mint Road	
206	Do. do. B do. ...	11, I Cross Gully, Old Hanuman Lane	
207	Do. do. B do. ...	65-69, Masjid Bandar Road	
208	Do. do. E do. ...	663, Tardeo Road	
209	Do. do. E do. ...	683, Do.	
210	Do. do. A do. ...	66, Gun Carriage Street	
211	Do. do. A do. ...	64, Do.	
212	Do. do. C do. ...	27, Mahadeo Shanker Street	Fit.
213	Do. do. D do. ...	49, Nepean Sea Road	
214	Do. do. D do. ...	35C, Banganga	Objectionable.
215	Do. do. A do. ...	61, 1st Marine Street	Unfit.
216	Do. do. B do. ...	136-138, New Hanuman Lane	
217	Do. do. B do. ...	138-146, Old Do.	
218	Do. do. C do. ...	123, Girgaum Street...	
219	Do. do. C do. ...	127, Do.	Suspicious.
220	Do. do. E do. ...	659, Tardeo Road, North	Unfit.
221	Do. do. E do. ...	659, Do. South	
222	Do. do. A do. ...	88-90, Parsi Bazaar Street...	Fit.
223	Do. do. A do. ...	79-81, Do.	Unfit.
224	Do. do. D do. ...	19, Benham Hall Lane	
225	Do. do. C do. ...	18, Dady Santok Lane	Suspicious.
226	Do. do. C do. ...	139 (2), Queen's Road	
227	Do. do. D do. ...	45-47, Warden Road	
228	Do. do. C do. ...	25, 3rd Pinjrapole Street	Unfit.
229	Do. do. C do. ...	32, Do.	
230	Do. do. A do. ...	23, Church Gate Street	
231	Do. do. A do. ...	6, Dalal Street	
232	Do. do. B do. ...	154, New Hanuman Lane	
233	Mrs. J. A. Sett	Locality not given	
234	Malaria Inspector, C Ward ...	C. P. Tank Road, No. 12	
235	Do. do. C do. ...	1, Carpenter Street	
236	Do. do. D do. ...	4, Walkeshwar Road	
237	Do. do. A do. ...	63, 1st Marine Lines	
238	Do. do. C do. ...	38, Banian Street	
239	Do. do. B do. ...	103-107, Mumbadevi Tank Road	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from			Situated at	Opinion as regards potability from chemical point.
240	Malaria Inspector,	D	Ward ...	Gowalia Tank Road No. I	}
241	Deputy Health Officer,	C	do. ...	15, Burrows Lane	
242	Malaria Inspector,	A	do. ...	23, Marine Lines	
243	Do. do.	E	do. ...	416, Parel Road	} Unfit.
244	Do. do.	A	do. ...	370-374, Bohora Bazar Street	
245	Do. do.	C	do. ...	145, Girgaum Road	}
246	Do do.	B	do. ...	245-247, Kalbadevi Road	Objectionable.
247	Do. do.	D	do. ...	30-32, Nepean Sea Road	Unfit.
248	Do. do.	A	do. ...	326, Bohora Bazar Street	Objectionable.
249	Do. do.	B	do. ...	82, Masjid Bunder Road	Unfit.
250	Do. do.	A	do. ...	306, Bohora Bazar Street	Objectionable.
251	Do. do.	B	do. ...	66-70, Samuel Street	Unfit.
252	Do. do.	E	do. ...	53, E. Love Lane	Objectionable.
253	Do. do.	A	do. ...	82, Bholwar Lane	Fit.
254	Do. do.	C	do. ...	76-86, Nizam Street...	}
255	Do. do.	D	do. ...	123, Khetwadi Main Road	
256	Do. do.	E	do. ...	106, Shaik Buran K. Street	
257	Do. do.	C	do. ...	62, I Pathan Street	
258	Do. do.	A	do. ...	46-47, Mint Road	
259	Do. do.	C	do. ...	10-11, Kolbhat Street	
260	Do. do.	D	do. ...	5, Kakadvadi, Girgaum	
261	Do. do.	C	do. ...	4, Ropa Lane	
262	Do. do.	A	do. ...	71, Frere Road	
263	Do. do.	D	do. ...	3, Bargadi Girgaum Back Road	
264	Do. do.	A	do. ...	80-82, Apollo Street	} Unfit.
265	Do. do.	C	do. ...	95, Trinity Street	
266	Do. do.	B	do. ...	43, Telwadi	
267	Do. do.	E	do. ...	106, Shaik Buran Street	
268	Do. do.	E	do. ...	Do.	
269	Do. do.	D	do. ...	20-30 (2 & 2A), Girgaum Back Road	
270	Do. do.	A	do. ...	4, Frere Road	
271	Do. do.	A	do. ...	33, Do.	
272	Do. do.	C	do. ...	4, Fanaswadi Cross Lane	
273	Do. do.	C	do. ...	326-328, Kalbadevi Road	
274	Do. do.	B	do. ...	1-15, Memanwada	
275	Do. do.	D	do. ...	562 (1), Girgaum Road	
276	Do. do.	A	do. ...	New Museum, Rampart Row	}
277	Do. do.	B	do. ...	157-159, Kalbadevi Road	Objectionable.
278	Do. do.	D	do. ...	13-14, Nickdawny Lane	}
279	Do. do.	B	do. ...	168-172, Kazi Sayad Street	} Unfit.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from				Situated at	Opinion.
280	Malaria	Inspector,	D	Ward ...	South corner of Compound 1-1A, 2A, 4-4A, 4B, Tardeo Road	Unfit.
281	Do.	do.	A	do. ...	61, 1st Cross Marine Street	
282	Do.	do.	D	do. ...	South Western of 1-1A, 2A, 4A, 4B, Tardeo Road	
283	Do.	do.	E	do. ...	To North of 2-4, Love Lane	
284	Do.	do.	E	do. ...	To South of Love Lane	
285	Do.	do.	B	do. ...	5, Telwadi	
286	Do.	do.	E	do. ...	14-16-20, Cross Nesbit Road	
287	Do.	do.	A	do. ...	5A, Hornby Road	
288	Do.	do.	B	do. ...	165-187, New Hanuman Lane	Suitable.
289	Do.	do.	D	do. ...	2, Warden Road	Unfit.
290	Do.	do.	A	do. ...	91-97, Meadow's Street	No opinion given.
291	Do.	do.	D	do. ...	385, Walkeshwar Road	Unfit.
292	Do.	do.	B	do. ...	90-92, Dhuru Street...	
293	Do.	do.	A	do. ...	49-53, Modi Street	
294	Do.	do.	A	do. ...	237, Bohora Bazar Street	
295	Do.	do.	C	do. ...	312, Princess Street...	
296	Do.	do.	E	do. ...	120, Tank Street	
297	Do.	do.	E	do. ...	421, Duncan Road	
298	Do.	do.	A	do. ...	41-43, Buzargali Street	
299	Do.	do.	D	do. ...	504-504A, Tardeo Road	Suspicious.
300	Do.	do.	C	do. ...	200-201, Cavel Street	Unfit.
301	Do.	do.	E	do. ...	246, Mahomedan Street	
302	Do.	do.	E	do. ...	85-89, Kamathipura Bazar Road	
303	Do.	do.	B	do. ...	14-32, Shaik Memon Street	
304	Do.	do.	C	do. ...	12, Sorab Santook Lane	Suspicious.
305	Do.	do.	E	do. ...	284-286, Haines Road	Objectionable.
306	Do.	do.	E	do. ...	18, Clare Road	Unfit.
307	Do.	do.	D	do. ...	South-East corner Road side 385, Walkeshwar Road	Suitable.
308	Do.	do.	A	do. ...	60-64, Tamarind Lane	Suspicious.
309	Do.	do.	C	do. ...	125, Girgaum Road	Do.
310	Do.	do.	D	do. ...	45, Pimpalwadi Girgaum	Unfit.
311	Do.	do.	E	do. ...	105, Tank Street	
312	Do.	do.	E	do. ...	165-167, 5th Street, Kamathipura...	Suspicious.
313	Do.	do.	C	do. ...	10, Malhar Rao Wadi	Unfit.
314	Do.	do.	B	do. ...	26-30, Kazi Sayad Street	
315	Do.	do.	A	do. ...	10-16, Mint Road	Fit.
316	Do.	do.	D	do. ...	385, Walkeshwar Road	
317	Do.	do.	A	do. ...	279-281, Bazar Gate	Unfit.
318	Do.	do.	D	do. ...	22, Kandewadi	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion.
319	Malarial Inspector, C Ward ...	104-106, Bhuleshwar Road	Unfit.
320	Do. do. C do. ...	352, Kalbadevi Road	
321	Do. do. D do. ...	466-466A, Grant Road under shop	
322	Do. do. D do. ...	Behind compound of 466-466A, Grant Road ...	
323	Do. do. E do. ...	No. 5, Dockyard Road	Fit.
324	Do. do. D do. ...	64, Mugbhat Cross Lane	Unfit.
325	Do. do. C do. ...	No. 2, C. P. Tank Road	Objectionable.
326	Do. do. C do. ...	16, Nana's Wadi Girgaum Road	Unfit.
327	Do. do. A do. ...	16-18, Custom House Road	Fit.
328	Do. do. D do. ...	14, Benham Hall Lane	
329	Do. do. A do. ...	21, Church Gate Street	Objectionable.
330	Do. do. C do. ...	449, Girgaum Road	Unfit.
331	Do. do. A do. ...	29-32, Modi Street	
332	Do. do. A do. ...	Roadside well Pitha Street	Fit.
333	Do. do. C do. ...	402, Girgaum Road	
334	Do. do. D do. ...	6, Ardeshir Dady Street	Objectionable.
335	Do. do. D do. ...	8, Do.	Unfit.
336	Do. do. E do. ...	7-9, Hansraj Lane	
337	Do. do. G do. ...	318, DeLisle Road	
338	Do. do. C do. ...	35-37, 2nd Fanaswadi	Objectionable.
339	Do. do. B do. ...	115, Kalbadevi Road	
340	Do. do. A do. ...	153, Bohra Bazar Street	Unfit.
341	Do. do. D do. ...	151, Khetwadi Main Road	
342	Deputy Health Officer, F do. ...	King's Circle, Matunga	
343	Malarial Inspector, C do. ...	364-366, Kalbadevi Road	
344	Do. do. A do. ...	47 & 69, Parsee Bazar Street	
345	Do. do. D do. ...	9A, Walkeshwar Road	Fit.
346	Do. do. D do. ...	14, Girgaum Road	Unfit.
347	Do. do. A do. ...	127-129, Bohra Bazar Street	
348	Do. do. C do. ...	29, Kolbhat Wadi	
349	Do. do. B do. ...	25, Darayasthan Street	
350	Do. do. C do. ...	4-5, Vanka Mohalla...	
351	Do. do. A do. ...	71-73, Apollo Street	Fit.
352	Do. do. C do. ...	2nd Khataralli outside house	
353	Do. do. D do. ...	1, Tardeo Road	
354	Do. do. A do. ...	45, C. P. Street	
355	Do. do. E do. ...	12, Parel Road	Unfit.
356	Do. do. E do. ...	3-5, Victoria Road	
357	Do. do. C do. ...	49-51, Cathedral Street	
358	Do. do. D do. ...	1, Tardeo Road, No. 1	
359	Do. do. D do. ...	1, Tardeo Road, near Dhobi Stand, No. 2 ...	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from			Situated at	Opinion as regards potability from chemical point.
360	Malarial	Inspector,	B Ward ...	86-88, Princess Street	Unfit.
361	Do.	do.	A do. ...	271-275, Bora Bazar Street	
362	Do.	do.	A do. ...	86-88, Hornby Road	
363	Do.	do.	D do. ...	1, Tardeo Road near Stable	Fit.
364	Do.	do.	C do. ...	18, 3rd Marine Street	Unfit.
365	Do.	do.	A do. ...	12, Homji Street	Suspicious.
366	Do.	do.	D do. ...	530-A, Tardeo Road	Unfit.
367	Do.	do.	A do. ...	43-45, Manordas Street	Objectionable.
368	Do.	do.	C do. ...	6, Panchait Lane	
369	Do.	do.	E do. ...	3-5, Victoria Road	
370	Do.	do.	C do. ...	1, (Sub No. 3) Cavel...	Unfit.
371	Do.	do.	A do. ...	91-97, Meadow Street	Fit.
372	Do.	do.	D do. ...	10, New Queen's Road	Unfit.
373	Do.	do.	C do. ...	4, Karelwadi	
374	Do.	do.	A do. ...	66-68, Hornby Road	Fit.
375	Do.	do.	A do. ...	172-174, Bora Bazar Street	
376	Do.	do.	D do. ...	5-7, Khetwadi, 10th Lane	Unfit.
377	Do.	do.	E do. ...	2, A. B. Tank Bunder Road	
378	Do.	do.	B do. ...	267-269, Shaik Memon Street	
379	Do.	do.	C do. ...	Sindhi Galli	
380	Do.	do.	A do. ...	24-28, Parsee Bazar Street...	Fit.
381	Do.	do.	D do. ...	3rd, A. I. Chunamkiln Road	
382	Do.	do.	A do. ...	Joint well 9-13 American Lane and 24-26 Tamarind Lane	
383	Do.	do.	A do. ...	9-11, Modi Street	Unfit.
384	Do.	do.	D do. ...	142, Thakurdwar Road	
385	Do.	do.	C do. ...	116-118, Bhuleshwar Road	
386	Do.	do.	B do. ...	136-138, Lohar Chall	
387	Do.	do.	G do. ...	428, DeLisle Road	
388	Do.	do.	C do. ...	5, 2nd Panjrapole Street	
389	Do.	do.	D do. ...	79, Khota's Cart	
390	Do.	do.	C do. ...	15-21, 3rd Bhoiwada Lane	
391	Do.	do.	D do. ...	171-176, Thakurdwar Road	
392	Do.	do.	A do. ...	260-264, Bora Bazar	Fit.
393	Do.	do.	C do. ...	56-65, Dadi Street Agiari	Unfit.
394	Do.	do.	D do. ...	2, Kakadwadi	
395	Do.	do.	E do. ...	1, Love Lane	
396	Do.	do.	E do. ...	1, Victoria Road	
397	Do.	do.	A do. ...	75-79, Apollo Street	Fit.
398	Do.	do.	C do. ...	66-68, 3rd Bhoiwada Lane	Unfit.
399	Do.	do.	D do. ...	58, Banganga	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from				Situated at	Opinion as regards potability from chemical point.
400	Malarial	Inspector,	D	Ward ...	2, Road North of French Bridge	Good.
401	Do.	do.	D	do. ...	33, Warden Road	Fit.
402	Do.	do.	C	do. ..	308, Princess Street	
403	Do.	do.	A	do. ...	71-A, Frere Road	Unfit.
404	Do.	do.	D	do. ...	16-18, 9th Lane, Khetwadi...	
405	Do.	do.	C	do. ...	114, Banian Street	
406	Do.	do.	G	do. ...	241, DeLisle Road	
407	Do.	do.	A	do. ...	57, Fort Street	
408	Do.	do.	A	do. ...	28-30, Homji Street...	Fit.
409	Do.	do.	D	do. ...	4, Khetwadi 10th Lane	
410	Do.	do.	E	do. ..	2, Grant Road Cross Line	Unfit.
411	Do.	do.	A	do. ...	214-216, Bazar Gate Street...	Fit.
412	Do.	do.	D	do. ...	40, Banganga	
413	Do.	do.	A	do. ...	76, Parsee Bazar Street	Unfit.
414	Do.	do.	C	do. ..	15, Dadysett Agiari Street...	Fit.
415	Do.	do.	A	do. ...	135-137, Bohra Bazar Street	
416	Do.	do.	C	do. ...	19-20, Kumbhar Lane	Unfit.
417	Do.	do.	D	do. ...	20-22, Gowalia Tank Road...	Fit.
418	Do.	do.	C	do. ...	126, Kalkadevi Road big well	Unfit.
419	Do.	do.	A	do. ...	44, Gogha Street	Fit.
420	Do.	do.	D	do. ...	20-22, Gowalia Tank Road...	
421	Do.	do.	A	do. ...	56-58, Bazar Gate Street	Unfit.
422	Do.	do.	D	do. ...	20-22, Gowalia Tank Road	Fit.
423	Do.	do.	C	do. ...	126, Kalbadevi Road	
424	Do.	do.	A	do. ...	9-11, Modi Street	
425	Do.	do.	D	do. ...	26-23, Gowalia Tank Road...	Unfit.
426	Do.	do.	F	do. ...	319, Bhoiwada Cross Road...	
427	Do.	do.	D	do. ...	681-693, Girgaum Road	
428	Do.	do.	C	do. ...	439-441, Do.	Fit.
429	Do.	do.	C	do. ...	211, Bhuleshwar Road	Unfit.
430	Do.	do.	A	do. ...	207-209 to 211-213, Bora Bazar Street	
431	Do.	do.	B	do. ...	26-28, Samuel Street	
432	Do.	do.	D	do. ...	92 (1), Thakurdwar Road	Fit.
433	Do.	do.	A	do. ...	325-329, Bora Bazar Street	
434	Do.	do.	A	do. ...	390, Do.	
435	Do.	do.	A	do. ...	260, Do.	
436	Do.	do.	A	do. ...	284-286, Do.	
437	Do.	do.	A	do. ...	318, Do.	Unfit.
438	Do.	do.	A	do. ...	315-317, Do.	Fit.
439	Do.	do.	A	do. ...	66, Bamanji Street	Unfit.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
440	Malarial Inspector, A Ward	64, Bamanji Street	Unfit.
441	Do. do. A do. ...	257-261, Bazar Gate Street	
442	Do. do. A do. ...	176-178, Bora Bazar Street	
443	Do. do. A do. ...	141-149, Do.	Suspicious.
444	Do. do. A do. ...	123-125, Do.	Unfit.
445	Do. do. A do. ...	212, Do.	Fit.
446	Do. do. A do. ...	268, Do.	Unfit.
447	Do. do. A do. ...	215-217, Do.	
448	Do. do. A do. ...	165-167, Do.	
449	Do. do. A do. ...	16-18, Gunbow Street	
450	Do. do. A do. ...	62, Do.	Fit.
451	Do. do. A do. ...	34, Do.	Unfit.
452	Do. do. A do. ...	52, Do.	Fair.
453	Do. do. A do. ...	48-50, Bamanji Street	Unfit.
454	Do. do. A do. ...	10-12, Do.	
455	Do. do. A do. ...	25-27, Do.	Suitable.
456	Do. do. A do. ...	33-39, Do.	Unfit.
457	Do. do. A do. ...	14-18, Do.	
458	Do. do. A do. ...	29-31, Do.	Fit.
459	Do. do. A do. ...	242, Bora Bazar Street	
460	Do. do. A do. ...	81, 83, 85, Joint well Mody Street	Unfit.
461	Do. do. A do. ...	195-199, Mody Street	
462	Do. do. A do. ...	87-89, Do.	Fair.
463	Do. do. A do. ...	157-159, Do.	Unfit.
464	Do. do. A do. ...	120, Do.	
465	Do. do. E do. ...	7, Victoria Road	No opinion given.
466	Do. do. A do. ...	45, Cawasji Patel Street	Very suspicious.
467	Do. do. A do. ...	65, Do.	Objectionable.
468	Do. do. A do. ...	97, Do.	Unfit.
469	Do. do. A do. ...	57, Do.	
470	Do. do. A do. ...	79, Do.	Suitable.
471	Do. do. A do. ...	63, Do.	Unfit.
472	Do. do. A do. ...	26, Do.	
473	Do. do. A do. ...	5, Barbar Lane	Fit.
474	Do. do. A do. ...	4-6, Do.	
475	Do. do. A do. ...	4, Nanabhai Lane	
476	Do. do. A do. ...	11, Nanabhai Lane, left hand by C. P. Street ...	No opinion given.
477	Do. do. A do. ...	14, Do. left hand by Hornby Road...	Unfit.
478	Do. do. A do. ...	7, Do. left hand by C. P. Street ...	Suspicious.
479	Do. do. A do. ...	11 B, Do. Entering from Hornby Road	Fit.

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
480	Malarial Inspector, A Ward ...	122-124, Mody Street	Unfit.
481	Do. do. A do. ...	126-128, Do.	
482	Do. do. A do. ...	49, Mint Road	
483	Do. do. A do. ...	23, Frere Road	
484	Do. do. A do. ...	126, C. P. Street	
485	Do. do. A do. ...	37-39, Gogha Street	
486	Do. do. A do. .	33, Pitha Street	
487	Do. do. A do. ...	24-26 Do.	
488	Do. do, A do. ...	42, Gogha Street	Fit.
489	Do. do. A do. ...	28-32, Pitha Street open plot	Unfit.
490	Do. do. A do. ...	16, Nanabhai Lane	Fit.
491	Do. do. A do. ...	292, Bora Bazar Street	
492	Do. do. C do. ...	73, Girgaon Back Road	Unfit.
493	Do. do. C do. ...	8, Ardesbir Dady Cross Lane	
494	Do. do. C do. ...	9-12, Maruti Lane	
495	Do. do. C do. ...	1-3, Girgaon Back Road	
496	Do. do. C do. ...	16, Kalbadevi Road	
497	Do. do. C do. ...	434, Girgaon Road	
498	Do. do. C do. ...	10, Burrows Lane	
499	Do. do. C do. ...	53-59, 2nd Marine Street	
500	Do. do. C do. ...	288-290, Kalbadevi Road	Objectionable.
501	Do. do. C do. ...	18, Dukarwadi	Unfit.
502	Do. do. C do. ...	157-151, Girgaon Road.	
503	Do. do. C do. ...	67, 1st Carpenter Street.	Objectionable.
504	Do. do. C do. ...	83-93, Bhuleshwar Road	Unfit.
505	Do. do. C do. ...	18, Panjrapole Road	
506	Do. do. C do. ...	411-413, Girgaon Road	Suspicious.
507	Do. do. C do. ...	137, Bhuleshwar Road	Unfit.
508	Do. do. C do. ...	3, Panchaitwadi	Objectionable.
509	Do. do. C do. ...	286, Princess Street	Unfit.
510	Do. do. C do. ...	11-15, 2nd Carpenter Street	
511	Do. do. C do. ...	61, 2nd Marine Street	
512	Do. do. C do. ...	286, Kalbadevi Road	
513	Do. do. C do. ...	5, Jambulwadi	Objectionable.
514	Do. do. C do. ...	B, Panjrapole Dog Khate	
515	Do. do. C do. ...	14, 2nd Khatar Alli	
516	Do. do. C do. ...	2-4, 1st Carpenter Street	
517	Do. do. C do. ...	45, Girgaon Back Road	Unfit.
518	Do. do. C do. ...	39-49, 2nd Marine Lines	
519	Do. do C do. ...	258-260, Kalkadevi Road	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*,

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
520	Malarial Inspector, B Ward. ...	468-476, Abdul Rehman Street	Unfit.
521	Do. do. B do. ...	93, Dhanji Street	
522	Do. do. B do. ...	85-87, Dhanji Street	
523	Do. do. B do. ...	67-69, Do.	
524	Do. do. B do. ...	28-32, Do.	
525	Do. do. B do. ...	452-454, Abdul Rehman Street	Objectionable.
526	Do. do. B do. ...	149-151, New Hanuman Lane	
527	Do. do. B do. ...	15-19, Vithoba Lane	Fair.
528	Do. do. B do. ...	236-262, Shaik Memon Street Side Well	Suspicious.
529	Do. do. B do. ...	236-262, Shaik Memon Street Centre Well ...	Fit.
530	Do. do. B do. ...	238, Shaik Memon Street	Slightly objectionable.
531	Do. do. B do. ...	24, Small Causes Court, Carnac Road	Fair.
532	Do. do. B do. ...	23, Princess Street	Objectionable.
533	Do. do. D do. ...	213, Thakurdwar Road	Unfit.
534	Do. do. B do. ...	17-19, Agiari 3rd Cross Lane	
535	Do. do. B do. ...	498-500, Abdul Rehman Street	
536	Do. do. B do. ...	45-53, Dhanji Street	
537	Do. do. B do. ...	297-309, Kalbadevi Road	Slightly objectionable.
538	Do. do. B do. ...	341-353, Do.	Objectionable.
539	Do. do. B do. ...	44-48 (1-2-3) Old Hanuman 1st Cross Lane ...	
540	Do. do. B do. ...	355-357, Kalbadevi Road	Unfit.
541	Do. do. B do. ...	52-54, Champawadi	Objectionable.
542	Do. do. B do. ...	279, Kalbadevi Road	Unfit.
543	Do. do. B do. ...	14-16, Vithoba Lane	Suspicious.
544	Do. do. B do. ...	111-115, Champawadi	Fit.
545	Do. do. B do. ...	26, Do.	
546	Do. do. B do. ...	160-164, Old Hanuman 1st Cross Lane	Slightly objectionable.
547	Do. do. B do. ...	229-231, Kalbadevi Road	Objectionable.
548	Do. do. B do. ...	41-47, Old Hanuman 1st Cross Lane	Fair.
549	Do. do. B do. ...	9, Ladwadi Old Hanuman Lane	Unfit.
550	Do. do. B do. ...	8-4, Sutar Chall	
551	Deputy Health Officer, G Ward ...	341, L. Cleavland Road	
552	Malarial Inspector, B do. ...	98-108, D'Souza Street	
553	Do. do. B do. ...	91-95, Samuel Street	Objectionable.
554	Do. do. B do. ...	59, Do.	Unfit.
555	Do. do. B do. ...	224, Masjid Bunder Road	
556	Do. do. B do. ...	98, Samuel Street	
557	Do. do. B do. ...	118-120, Samuel Street	
558	Do. do. B do. ...	118-120, D'Souza Street	
559	Do. do. B do. ...	55-59, Kazi Sayad Street	

STATEMENT SHOWING THE NUMBER OF WELL WATERS EXAMINED CHEMICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*concld.*

Serial No.	Received from	Situated at	Opinion as regards potability from chemical point.
560	Malarial Inspector, B Ward. ...	37-41, Kazi Sayad Street	Unfit.
561	Do. do. B do. ...	81-85, Isaji Street...	
562	Do. do. B do. ...	271-273, Janjikar Street	
563	Do. do. B do. ...	118-120, Kazi Sayad Street	Objectionable.
564	Do. do. B do. ...	113-117, Sarang Street	Unfit.
565	Do. do. B do. ...	2, Mazagaon Road	
566	Do. do. B do. ...	157-167, Parel Road...	
567	Do. do. B do. ...	539, Chunam Kiln Cross Lane	
568	Do. do. B do. ...	71, Parel Road	
569	Do. do. B do. ...	103-117, Parel Road	
570	Do. do. B do. ...	75-79, Do.	Slightly objectionable.

APPENDIX V.

STATEMENT SHOWING THE NUMBER OF ARTICLES, OTHER THAN WATERS, EXAMINED BACTERIOLOGICALLY IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Received from	Blood for Malaria.	Stool for Cholera.	Milk for Tubercle Bacilli.	Sputum for Tubercle Bacilli.	Sputum for Pus.	Milk for Cholera.	Fish for Cholera.	Vaccine Glycerine.	Izol Fluid.	Izol Powder.	Sweetmeat for Cholera.	Basundi for Enteric.	Urine for Tubercle Bacilli.	Urine for Gonorrhœa.	Milk for Typhoid.	Butter for Cholera.	Blood for Typhoid.	Zonde Fluid.	Intestine for Cholera.	Aerated water for Cholera.	Bread for Cholera.	Fish for Enteric.	Fish for Gartners.	Fish for B. E. Sporogenis.	Fish for Streptococcic.	Fish for Staphylococcic.	Basundi & Milk for Gartners.	Basundi & Milk for B. E.S.	Basundi & Milk for Staphylococci.	Basundi & Milk for Streptococcic.	Basundi & Milk for Coli.	Fish for B Coli.	Blood for Filaria.	Stool for Dysentery.	Fæces for B Coli.	Sewage for B Coli.	Blood for Red Cells Count.	Disinfectants.	Blood for Cholera.	Bact. Tests of Milk.	Condensed Milk.	Total.
Executive Health Officer. ..	..	11	..	..	..	..	6	..	10	9	..	..	..	..	..	..	..	2	..	..	..	6	6	6	6	6	..	..	..	..	6	..	..	1	1	..	..	13	10	..	99
Dy. Health Officer A ..	44	2	10	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	60
,, ,, B ..	59	2	39	1	..	..	..	..	..	..	3	..	..	..	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	109
,, ,, C ..	23	1	19	1	..	9	..	..	..	..	1	1	..	..	19	..	..	..	..	..	..	..	..	..	..	..	2	2	2	2	2	..	..	..	..	..	..	..	..	..	84
,, ,, D ..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23
,, ,, E ..	..	7	..	..	..	5	..	..	..	..	..	..	..	..	12	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	29
,, ,, F ..	..	40	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	42
,, ,, G ..	..	40	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	..	..	..	..	..	..	..	53
M. O. Arthur Road Hospital ..	71	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	73
Vaccination Supdtt. ..	..	..	..	..	..	..	..	1674	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,674
Victoria Gardens Supdtt. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
Private	4	..	..	44	1	..	..	..	..	..	..	..	5	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	58
Total ...	130	87	164	46	1	14	6	1674	10	9	4	1	5	2	57	3	1	2	2	2	1	6	6	6	6	6	2	2	2	2	2	6	9	1	1	1	1	2	13	10	1	2,306

APPENDIX VI.

STATEMENT SHOWING THE NUMBER OF WATER SAMPLES EXAMINED BACTERIOLOGICALLY FOR PATHOGENIC MICROBES, ETC., IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Received from	Tested for							
	Microbes per cc.	Cholera.	Enteric.	Gärtnërs.	B. Coli (lactose-fermenters.)	B. E. Sporogenes.	Water for Larvæ.	Total.
Executive Health Officer	.....	26	.....	.....	.....	.....	.....	26
Municipal Analyst	192	207	197	197	197	197	.....	1,187
Deputy Health Officer, A	2	28	6	2	2	2	.....	42
Do. B	.....	33	4	.....	.....	.....	1	38
Do. C	.....	61	4	.....	.....	.....	.....	65
Do. D	.....	30	3	.....	.....	.....	.....	33
Do. E	.....	229	19	.....	.....	.....	.....	248
Do. F	.....	27	.....	.....	.....	.....	.....	27
Do. G	.....	51	11	.....	.....	.....	.....	62
Hydraulic Engineer	2	7	2	2	2	2	.....	17
Total	196	699	246	201	201	201	1	1,745

APPENDIX VII.

STATEMENT SHOWING THE NUMBERS OF WATER SAMPLES EXAMINED BACTERIOLOGICALLY FOR PATHOGENIC MICROBES AND IN WHICH THE SAME WERE DETECTED IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Cholera.		Enteric.		B. E. Sporogenis.		Gartners.		B. Coli (Lactose-fermenters).	
Total No. of Samples examined.	No. of Samples in which detected.	Total No. of Samples examined.	No. of Samples in which detected.	Total No. of Samples examined.	No. of Samples in which detected.	Total No. of Samples examined.	No. of Samples in which detected.	Total No. of Samples examined.	No. of Samples in which detected.
699	26	246	*Nil*	201	*Nil*	201	*Nil*	201	194

APPENDIX **VIII.**

STATEMENT SHOWING THE NUMBER OF STOOLS EXAMINED FOR CHOLERA VITRIO IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912.

Serial No.	Laboratory sample No.	Patient No.	Age.	Sex.	Caste.	Received from other than Hospital.	Dates of			Reference to serial Number if a specimen is repeated.	Remarks by Municipal Analyst.		Remarks by Arthur Road Hospital of recovery or death.
							Attack.	Admission to Hospital.	Sample sent to Laboratory.		Seen only by microscope.	Positive culturally and biologically.	
1	967	.....	...	.....	.....	D. R. T. ...	.....	.....	29th April 1912...	...	—	...	
2	1118	802	35	Male ...	Christian ...	.....	10th May 1912...	10th May 1912...	11th May „ ...	...	—	...	Recovered.
3	1119	801	36	„ ...	Hindu ...	.....	6th „ „ ...	10th „ „ ...	11th „ „ ...	...	—	...	Died.
4	1139	.....	...	.....	.....	D. R. 3 ...	.....	.....	17th „ „ ...	...	—	...	
5	1179	899	20	Female ...	Hindu ...	.....	26th May 1912 ...	28th May 1912 ...	28th „ „ ...	...	—	...	Died.
6	1240	.....	...	.....	.....	D. R. 3 ...	.....	.....	10th June 1912 ...	...	+	—	
7	1344	981	45	Male ...	Hindu ...	.....	12th June 1912...	12th June 1912 ...	13th „ „ ...	...	—	...	Died.
8	1345	986	40	„ ...	Mussalman...	.....	12th „ „ ...	13th „ „ ...	13th „ „ ...	...	+	—	Recovered.
9	1356	999	30	„ ...	„ ...	.....	13th „ „ ...	14th „ „ ...	14th „ „ ...	...	+	—	Died.
10	1407	1081	25	„ ...	Hindu ...	.....	17th „ „ ...	19th „ „ ...	19th „ „ ...	...	+	+	Recovered.
11	1420	1090	35	„ ...	„ ...	.....	19th „ „ ...	20th „ „ ...	21st „ „ ...	...	—	...	Do.
12	1421	1091	25	„ ...	Mussalman...	.....	20th „ „ ...	20th „ „ ...	21st „ „ ...	...	—	...	Do.
13	1422	1092	30	„ ...	Parsee ...	.....	20th „ „ ...	20th „ „ ...	21st „ „ ...	...	+	—	Do.
14	1492	1153	30	„ ...	Mussalman...	.....	27th „ „ ...	27th „ „ ...	28th „ „ ...	...	—	...	Do.
15	1493	1154	18	Female ...	European ...	.....	27th „ „ ...	27th „ „ ...	28th „ „ ...	...	+	—	Do.
16	1686	1240	16	„ ...	Hindu ...	.....	16th July „ ...	16th July 1912 ...	19th July 1912...	...	—	...	Died.
17	1687	1243	18	„ ...	„ ...	.....	12th „ „ ...	17th „ „ ...	19th „ „ ...	...	—	...	Recovered.

STATEMENT SHOWING THE NUMBER OF STOOLS EXAMINED OF CHOLERA VITRIO IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Laboratory sample No.	Patient No.	Age.	Sex.	Caste.	Received from other than Hospital.	Dates of			Reference to serial Number if a specimen is repeated.	Remarks by Municipal Analyst.		Remarks by Arthur Road Hospital of recovery or death.
							Attack.	Admission to Hospital.	Sample sent to Laboratory.		Seen only by microscope.	Positive culturally and biologically.	
18	1688	1245	12	Female ...	Hindu ...	... ..	17th July 1912 ...	18th July 1912 ...	19th July 1912 ...	...	+	—	Recovered.
19	1694	1207	28	Male ...	Christian ...	.....	9th „ „ ...	9th „ „ ...	28th „ „ ...	...	—	...	Do.
20	1695	1223	25	„ ...	Hindu ...	.....	12th „ „ ...	12th „ „ ...	20th „ „ ...	...	+	—	Do.
21	1696	1238	25	„ ...	„ ..	.....	15th „ „ ...	16th „ „ ...	20th „ „ ...	...	—	...	Do.
22	1697	1246	25	„ ...	„ ...	.....	19th „ „ ...	19th „ „ ..	20th „ „ ...	...	—	...	Do.
23	1735	1252	50	„ ...	„ ...	.....	17th „ „ ...	21st „ „ ...	24th „ „ ...	...	+	+	Do.
24	1736	1249	32	„ ...	„ ...	.....	19th „ „ ...	20th „ „ ..	24th „ „ ...	...	+	+	Do.
25	1737	1254	35	Female ...	„ ...	.....	21st „ „ ...	22nd „ „ ...	24th „ „ ...	...	+	—	Died.
26	1738	1255	45	Male ...	„ ...	.....	21st „ „ ...	22nd „ „ ...	24th „ „ ...	...	—	...	Recovered.
27	1739	1259	9	„ ...	Mussalman...	.. ...	23rd „ „ ...	24th „ „ ...	24th „ „ ...	...	+	+	Died.
28	1804	1289	30	„ ...	Hindu ...	.....	1st August 1912..	2nd Aug. 1912...	3rd Aug. 1912...	43	+	+	Recovered.
29	1805	1290	30	Female ...	European ...	.....	2nd „ „ ...	2nd „ „ ...	3rd „ „ ...	...	+	+	Do.
30	1806	1294	23	Male ...	Christian ...	.....	31st July 1912 ...	2nd „ „ ...	3rd „ „ ...	...	+	+	Do.
31	1807	1280	22	„ ...	Hindu ...	.....	30th „ „ ...	31st July. 1912...	3rd „ „ ...	42	—	...	Do.
32	1808	1288	35	„ ...	„ ...	.....	27th „ „ ...	1st Aug. 1912 ...	3rd „ „ ...	...	+ (Doubtful)	—	Do.
33	1809	1290	30	Female ...	European ...	.....	2nd Aug. 1912 ...	2nd „ „ ...	3rd „ „ ...	29	—	...	Discharged.
34	1873	1297	18	Male ...	Hindu ...	.....	3rd „ „ ...	3rd „ „ ...	6th „ „ ...	45	+	—	Recovered.
35	1874	1284	30	Female ...	Mussalman...	.....	1st „ „ ...	1st „ „ ...	6th „ „ ...	...	—	...	Do.

STATEMENT SHOWING THE NUMBER OF STOOLS EXAMINED OF CHOLERA VITRIO IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Laboratory sample No.	Patient No.	Age.	Sex.	Caste.	Received from other than Hospital.	Dates of			Reference to serial Number if a specimen is repeated.	Remarks by Municipal Analyst.		Remarks by Arthur Road Hospital of recovery or death.
							Attack.	Admission to Hospital.	Sample sent to Laboratory.		Seen only by microscope.	Positive culturally and biologically.	
36	1875	1315	23	Male ...	Christian ...	.....	7th August1912...	5th August1912...	6th August1912...	46	+	+	Recovered.
37	1909	1318	35	„ ...	Hindu ...	.....	4th „ „ ...	6th „ „ ...	7th „ „ ...	...	+	+	Do.
38	1910	1319	12	„ ...	„ ...	.....	4th „ „ ...	6th „ „ ...	„ „ „ ...	...	+	+	Do.
39	1925	1304	40	„ ...	Mussalman...	.....	4th „ „ ...	4th „ „ ...	8th „ „ ...	...	+	—	Do.
40	1926	1307	22	„ ...	Hindu ...	.....	4th „ „ ...	4th „ „ ...	„ „ „ ...	...	—	...	Do.
41	1949	1313	35	„ ...	„ ...	.....	5th „ „ ...	5th „ „ ...	10th „ „ ...	...	—	...	Do.
42	1958	1280	2	„ ...	Christian ...	.....	1st „ „ ...	1st „ „ ...	12th „ „ ...	...	+	—	Died.
43	1959	1289	30	„ ...	Hindu ...	.....	1st „ „ ...	2nd „ „ ...	„ „ „ ...	28	+	+	Recovered.
44	1971	1304	...	...	...	.....	.....	.....	13th „ „ ...	39	—	...	Do.
45	1972	1297	18	Male ...	Hindu ...	.....	3rd Aug. 1912 ...	3rd Aug. 1912 ...	„ „ „ ...	...	—	...	Do.
46	1985	1315	...	...	...	.....	.....	.....	15th „ „ ...	36	+	—	Do.
47	1986	1299	3	Female ...	Eurasian ...	.....	2nd Aug. 1912...	3rd Aug. 1912 ...	„ „ „ ...	...	+	+	Do.
48	2020	1308	23	Male ...	Mussalman...	.....	4th „ „ ...	4th „ „ ...	17th „ „ ...	...	—	...	Do.
49	2021	1328	35	„ ...	Hindu ...	.....	4th „ „ ...	6th „ „ ...	„ „ „ ...	...	—	...	Do.
50	2034	1330	30	„ ...	Mussalman...	.....	12th „ „ ...	12th „ „ ...	20th „ „ ...	...	—	...	Died.
51	2035	1334	35	„ ...	Hindu ...	.....	12th „ „ ...	13th „ „ ...	„ „ „ ...	...	—	...	Do.
52	2074	1341	40	„ ...	„ ...	.....	15th „ „ ...	15th „ „ ...	22nd „ „ ...	...	+	—	Recovered.
53	2075	1331	27	„ ...	„ ...	.....	12th „ „ ...	12th „ „ ...	„ „ „ ...	...	+	—	Do.

STATEMENT SHOWING THE NUMBER OF STOOLS EXAMINED OF CHOLERA VITRIO IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*contd.*

Serial No.	Laboratory sample No.	Patient No.	Age.	Sex.	Caste.	Received from other than Hospital.	Dates of			Reference to serial Number if a specimen is repeated.	Remarks by Municipal Analyst.		Remarks by Arthur Road Hospital of recovery or death.
							Attack.	Admission to Hospital.	Sample sent to Liboratory.		Seen only by Microscope.	Positive culturally and biologically.	
54	2080	1350	40	Male ...	Parsee ...	.....	20th Aug 1912 ..	22nd Aug. 1912...	24th Aug. 1912...	56	+	+	Recovered.
55	2081	1357	22	„ ...	„ ...	.....	20th „ „ ...	22nd „ „ ...	24th „ „ ...	57	+	+	Do.
56	2112	1350	40	„ ...	„ ...	.....	20th „ „ ...	22nd „ „ ...	28th „ „ ...	54	+	—	Do.
57	2113	1351	22	„ ...	„ ...	.....	20th „ „ ...	22nd „ „ ...	28th „ „ ...	55	—	...	Do.
58	2114	1357	21	Female ...	Hindu ...	.....	26th „ „ ...	26th „ „ ...	„ „ „ ...	...	—	...	Do.
59	2128	1350	...	.....	.....	.....	.....	.....	2nd Sep. 1912 ...	56	—	...	Do.
60	2129	1351	..	.....	.....	.....	.....	.....	22nd „ „ ...	57	—	...	Do.
61	2167	1370	45	Male ...	Parsee ...	.....	5th Sep. 1912 ...	6th Sep. 1912 ...	7th „ „ ...	...	+	—	Do.
62	2168	1371	35	„ ...	„ ..	.....	5th „ „ ...	6th „ „ ...	7th „ „ ...	...	+	+	Do.
63	2363	1414	45	„ ...	Christian ...	.. ...	14th Oct. 1912 ...	15th Oct. 1912 ...	15th Oct. 1912 ...	...	+	+	Died.
64	2543	1439	40	„ ...	European ...	.....	3rd Nov. 1912...	3rd Nov. 1912...	4th Nov. 1912...	...	+	+	Do.
65	2693	1464	22	Female ...	Parsee ...	.....	21st „ „ ...	22nd „ „ ...	22nd „ „ ...	...	+	+	Do.
66	2694	1465	38	Male ...	„ ...	.. ...	22nd „ „ ...	22nd „ „ ...	23rd „ „ ...	...	+	+	Do
67	2746	1470	30	„ ...	Hindu ...	.....	23rd „ „ ...	25th „ „ ..	26th „ „ ...	...	—	...	Dicharged.
68	2789	1477	28	„ ...	„ ...	.....	4th Dec. 1912 ...	5th Dec 1912 ...	5th Dec. 1912 ...	...	+	+	Do.
69	2798	1488	35	„ ...	„ ...	.....	8th „ „ ...	9th „ „ ...	10th „ „ ...	...	+	+	Do.
70	2797	1490	47	„ ...	„ ...	.....	8th „ „ ...	9th „ „ ...	10th „ „ ...	...	+	+	Do.
71	2913	1511	13	„ ...	„ ...	.....	16th „ „ ...	17th „ „ ...	18th „ „ ...	...	+	+	Do.

STATEMENT SHOWING THE NUMBER OF STOOLS EXAMINED OF CHOLERA VITRIO IN THE MUNICIPAL LABORATORY DURING THE YEAR 1912—*concld.*

Serial No.	Laboratory sample No.	Patient No.	Age.	Sex.	Caste.	Received from other than Hospital.	Dates of			Reference to serial Number if a specimen is repeated.	Remarks by Municipal Analyst.		Remarks by Arthur Road Hospital of recovery or death.
							Attack.	Admission to Hospital.	Sample sent to Laboratory.		Seen only by microscope.	Positive culturally and biologically.	
72	2948	1517	35	Male ...	Hindu ...	.....	19th Dec. 1912 ...	19th Dec. 1912 ...	19th Dec. 1912 ...	...	+	+	Died.
73	2957	1527	35	„ ...	Mussalman...	.....	24th „ „ ...	26th „ „ ...	26th „ „ ...	...	+	—	Discharged.
74	2961	1530	18	„ ...	Hindu ...	.....	24th „ „ ...	27th „ „ ...	28th „ „ ...	...	+	+	Died.
75	2761	.....	...	.....	.....	D. R. 4 ...	.....	.....	3rd „ „ ...	...	—	...	
76	2410	.....	...	.....	.....	Health Officer	.....	.....	16th Oct. 1912...	...	+	...	
77	2464	.....	35	Male ...	Christian ...					...	—	...	
78	2465	.....	20	„ ...	„ ...					...	—	...	
79	2466	.....	19	„ ...	„ ...					...	—	...	
80	2467	.....	32	„ ...	„ ...					...	—	...	
81	2468	.....	34	„ ...	Mahar ...	Do. ...	.....	.....	23rd Oct. 1912.	...	—	...	
82	2469	.....	24	„ ...	„ ...					...	—	...	
83	2470	.....	30	„ ...	Surti ...					...	—	...	
84	2471	.....	27	„ ...	Mahar ...					...	—	...	
85	2472	.....	30	„ ...	European ...					...	—	...	
86	2473	.....	27	„ ...	„ ...	D. R. 4 ...	.....	3rd Dec. 1912 ...	.....	...	—	...	
87	2761	.....	...	„ ...	.....		.....	.....	.....	...	—	...	

APPENDIX IX.

STATEMENT SHOWING THE NUMBER OF JARS OF RAT POISON AND MERCURIAL SOLUTION PREPARED AND ISSUED AT THE CENTRAL DISINFECTION DEPOT AT GRANT ROAD DURING THE YEAR 1912.

Issued to	No. of Jars of Rat Poison issued.	No. of Mercurial Solution Jars issued.	REMARKS.
A Ward	2		Balance of Rat Poison Jars on 1st January 1912 ... *Nil.*
B „	38		Prepared during 1912 ... 92
C „	10		Total ... 92 Jars of Rat Poison.
D „	5		*Deduct*—Issued during 1912... 81 „ „
E „	22		Balance on 1st Jan. 1913 (*vide* para. on page xii). 11 Jars of Rat Poison.
F „	4		
G „	.....		
District No. 1		25	Balance of Mercurial Solution Jars on 1st January 1912 ... 45 Jars.
„ „ 2		85	Prepared during the period ... 417 „
„ „ 3		85	Total ... 462 „
„ „ 4		15	*Deduct*—Issued during 1912 ... 434 „
„ „ 5		25	Balance on 1st January 1913... 28 Jars.
„ „ 6		24	
„ „ 7		50	
„ „ 8		55	
„ „ 9		30	
„ „ 10		40	
	81	434	

The Annual Report of the Superintendent of Vaccination for 1912.

Superintendent.

I was in charge of the Department throughout the year.

Vaccination Establishment.

The Establishment consists of the Superintendent, the Assistant Superintendent, ten Vaccinators, five Clerks, seventeen Karkuns, three Peons and fifteen Coolies.

Vaccine operations with results during 1903—1912.

2. The following statement gives the number of *persons* primarily vaccinated and re-vaccinated during 1912 and the preceding nine years, with the number of persons successful and the percentage of success :—

Year.	Primary Vaccinations.			Re-vaccinations.			Total Number of persons vaccinated.		
	Number of persons vaccinated.	Number successful.	Percentage of success.	Number of persons re-vaccinated.	Number successful.	Percentage of success.	Number of persons vaccinated and re-vaccinated.	Number successful.	Percentage of success.
1903	15,010	13,288	88·19	4,948	726	14·67	19,958	13,964	69·97
1904	17,545	15,994	91·16	3,854	289	7·50	21,399	16,283	76·09
1905	18,777	15,952	84·95	20,571	780	3·79	39,348	16,732	42·52
1906	17,086	15,719	92·00	1,744	178	10·21	18,830	15,897	84·42
1907	16,720	15,355	91·84	1,282	85	6·63	18,002	15,440	85·77
1908	19,122	16,801	87·86	4,633	257	5·55	23,755	17,058	71·80
1909	18,447	16,336	88·56	10,669	116	1·09	29,116	16,452	56·50
1910	17,356	15,371	88·56	23,600	70	·30	40,956	15,441	37·70
1911	19,312	17,819	92·27	18,786	86	·46	38,098	17,905	47·00
1912	20,946	18,878	90·13	17,094	201	1·18	38,040	19,079	50·15

It will be observed that the total number of persons operated upon during the year was 38,040 against 38,098 in 1911, of which 20,946 were primary vaccinations, being 1,634 more than in 1911 and 17,094 were re-vaccinations, being 1,692 less than in 1911.

Of the Primary Vaccinations 18,878 were successful, the percentage of success being 90·13 ; this, however, is raised to 98·32 if 1,745 "Unknown" cases be left out. Of the re-vaccinations 201 were successful, yielding a percentage of 1·18, which, however, is raised to 60·54 if 16,762 "Unknown" cases be excluded. Calculated on the total number of persons vaccinated the percentage of success works out to 50·15.

Primary Vaccinations and results by Age-periods.

3. The following table shows the results in Primary Vaccinations by age-periods :—

Under 1 year.			Between 1 and 6 years.			Above 6 years.			Total results.			Total operations.
Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	
15,548 Ratio per mille of population. 15·87	242	1,024	3,208	96	620	122	7	101	18,878 Ratio per mille of population. 19·27	344	1,745	20,967

Vaccinations by others than the Vaccination Staff.

4. The subjoined table shows the vaccinations performed by Private Medical Practitioners, the District Registrars of the Health Department and the Medical Officers in charge of the two Jails and the Colaba Lunatic Asylum :—

	Primary Vaccinations.							Re-vaccinations.		
				Successful.						
	Males.	Females.	Total.	Under 1 Year.	1 and 6 Years.	All Ages.	Unknown.	Total.	Successful.	Unknown.
District Registrars. ...	19	28	47	15	8	26	21	15	6	8
L. M. Practitioners ...	...	2	2	2	...	2	...	214	...	214
The two Jails	9	4	13	12	1	13	...	5,762	309	662
Colaba Lunatic Asylum	...	...	...	...	...	...	...	163	124	...

5. Table showing the particulars of Primary and Re-Vaccinations verified by Inspecting Officers :— Inspection of Vaccinations.

Total number of persons vaccinated.		Total number inspected.				Percentage of inspection to total number vaccinated.				Percentage of cases found successful to total number inspected.				Percentage of success reported by vaccinators.	
		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.		By the Superintendent.		By the Asstt. Supdt. and the Head Vaccinator.			
P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.	P.	R.
20,946	17,094	S. F. (53,44+536) =5,397	S. F. (8+6) =11	S. F. (11,778+216) =11,399	S. F. (514+26) =71	25·76	·06	54·39	·42	99·02	72·73	98·11	71·83	99·13	1·18

6. The Table below shows by months the number of calves inoculated and the number rejected after inoculation owing to sickness, as also the number of calves scraped for emulsion during the year and the number used for calf-to-arm vaccination :— Heifers inoculated, scraped for emulsion, &c.

Heifers.	1912. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Number inoculated...	32	31	39	32	36	38	33	27	23	24	24	24	353
Number successful ...	26	26	38	31	33	26	29	21	23	23	23	20	319
Number unsuccessful	6	4	...	1	3	1	1	3	...	...	1	2	21
Number rejected after inoculation owing to sickness	...	1	1	...	...	1	3	1	...	1	...	2	13
Number inoculated for emulsion	14	15	20	17	17	15	17	6	16	15	14	10	176
Number inoculated for calf-to-arm vaccination ...	18	16	19	15	19	13	16	21	7	9	10	14	177

7. The following statement shows the proceeds from the sale of lymph, the fees realized from Vaccination at private places, &c., during the year under report :— Proceeds from the sale of lymph and from other sources.

Amount realized by the sale of lymph.	Municipal moiety of the fees from private vaccination.	Municipal fee for vaccination instruction to Medical Students.	Municipal fee for giving vaccination extracts, &c.	Total.
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
4,209 2 0	682 2 0	375 0 0	57 14 6	5,224 2 6

8. The cost of each successful Vaccine operation, including all charges, was Rs. 1-7-5 against Rs. 1-8-3 in the preceding year; if the amount realized by the sale of lymph, by fees for private vaccination, &c. (Rs. 5,224-2-6) be deducted from the total expenditure, the cost works out to Rs. 1-3-1. Cost of single operation.

9. If calculated on the total number of vaccine operations, the cost of each operation, after deducting the proceeds from the sale of lymph, from private vaccination, &c., comes to Re. 0-9-7.

10. During the year under report 359 certificates of postponement of vaccination of children were granted. Postponement certificates.

11. There were no prosecutions during the year, either for neglect of vaccination, or for neglect of inspection of the result. Prosecution under the Vaccination Act.

Work done with different kinds of Lymph.

12. The following table shows the different kinds of lymph used, the operations done with each kind and the comparative results obtained during the year 1912 :—

Kind of Lymph.	Number of operations (not persons).		Successful cases excluding the "Unknown."		"Unknown" cases.		Percentage of success excluding the "Unknown."	
	P.	R.	P.	R.	P.	R.	P.	R.
(*a*) Human	...	...	...	...	...	...	...	...
(*b*) Animal	5,774	2,267	5,241	159	496	2,041	99·30	70·35
(*c*) Glycerinated	15,193	14,827	13,637	42	1,249	14,731	97·80	43·75
Total Operations ...	20,967	17,094	18,878	201	1,745	16,772	98·21	62·42

Instructions in Vaccination.

13. During the year under report 3 Military Medical pupils and 52 Civil Medical and other Students attended the different Public Vaccine Stations in the City for receiving practical instruction in Vaccination.

Small-pox.

14. During the year under report the total number of deaths reported from Small-pox was 979 as against 443 in the year preceding.

Vaccination of Pilgrims to the Haj.

The Haji season commenced about the beginning of May and ended in October 1912. The total number who left Bombay for the Haj during this period was 15,464. Of these 10,587 were vaccinated in Bombay before embarkation, *i. e.*, 68·46 per cent. The following table shows the number of males and females and the number of Primary Vaccinations and Re-vaccinations performed amongst the Pilgrims by the Special Staff that was engaged for the purpose (*viz.*, 1 Vaccinator, 1 Clerk, 1 Cooly and 1 Nurse).

——	Males.	Females.	Total.
Primary Vaccinations	59	47	106
Re-vaccinations	8,531	1,950	10,481
Total Number ...	8,590	1,997	10,587

The female pilgrims were vaccinated by Nurse, Miss. S. Guidera.

Ill-effects of Vaccination.

No serious ill-effects following vaccination were observed or brought to notice during the year.

Vaccination in Bandra and Kurla.

The following table shows the vaccination work done in the Bandra and Kurla Circles in 1912 compared with that done in 1911:—

Vaccination Circles.	Population according to the Census of 1911.	Year.	Children successfully vaccinated.		Children available for vaccination.	Persons primarily vaccinated.	Persons re-vaccinated.	Total number of persons operated upon.
			Under 1 year.	Under 6 years.				
Bandra	22,792	1911	170	129	485	354	11	365
		1912	198	131	535	417	280	697
Kurla	14,932	1911	67	48	166	156	.....	156
		1912	29	28	103	84	.....	84

J. S. NERURKER,

B.Sc., L. M. & S. (Bom.), D.P.H. (Camb.),

Superintendent of Vaccination,

Bombay.

BOMBAY, 28*th February* 1913.

Annual Report of the Arthur Road Hospital for the year 1912.

I.—Administration.

1. There were no changes in the staff during the year.

II.—General Statistics.

2. The total number of admissions was 1,540 as compared with 965 in 1911, and 1,266 in 1910. The maximum number of patients present on any particular day was 176, as compared with 138 and 173 in 1911 and 1910, respectively.

3. Only 32 Hajees were admitted during the year, suffering from Small-pox, of whom 10 died and 22 recovered; 7 were unvaccinated, 8 were vaccinated in infancy and the remaining 17 were vaccinated in Bombay in the previous year, prior to their embarkation for Jeddah.

4. The principal admissions were from small-pox, chicken-pox measles and cholera. Admissions from Small-pox numbered 658 as compared with 340 during 1911; chicken-pox and measles were responsible for 53 and 51 admissions, respectively. Cholera admissions numbered 475 as compared with 39 during the previous year.

5. The following Table shows the details of admissions, deaths, recoveries and case mortality rate per cent.:—

Diseases.	Admission.	Deaths.	Recoveries.	Case-mortality rate per cent.
Small-pox	658	165	493	25·00
Chicken-pox	53	.....	53	.....
Measles	51	.....	51	.....
Cholera	475	236	239	49·68
Mumps	12	.....	12	.....
Erysipelas	13	5	8	38·46
Whooping Cough	9	.....	9	.....
Relapsing Fever	2	1	1	50·00
Plague	6*	.....	.....	.....
Observation Cases	261	83	178	31·8

* Transferred to Maratha Hospital.

III.—Small-pox.

6. Small-pox prevailed from January to May; it was very low during the seven following months. That the epidemic was not as severe as the three preceding is shown by the low case-mortality rate of 25·00 per cent.

The Vaccinal Condition of Small-Pox Patients.

7. The following statement compares the vaccinal condition of patients and the rate of their case-mortality during the year as contrasted with the three previous years:—

Year.	Vaccinated patients.		Unvaccinated patients.	
	Number.	Case-mortality rate per cent.	Number.	Case-mortality rate per cent.
1909	226	14·1	187	42·2
1910	399	18·0	286	41·9
1911	202	10·8	138	39·8
1912	426	16·9	232	40·51

The foregoing figures indicate that the rate of case-mortality among the unvaccinated was more than twice as high as among the vaccinated, that is 40·51 per cent. in the former as compared with 16·9 per cent. in the latter.

8. The case-mortality rate among vaccinated Hindus was 13·42 per cent. as compared with 40·35 per cent. among those unvaccinated. The Mahomedan vaccinated patients were comparatively few, and they had the low mortality rate, 17·38 per cent., as compared with 53·33 per cent. among those not so protected, and lastly among the Native Christians, mostly Goans, those protected had a mortality rate of 25·8 per cent. as compared with 36·36 per cent. in the unvaccinated.

The Vaccinal Condition of Children under 10 years.

9. The following statement shows the vaccinal condition of children under 10 years of age admitted for Small-pox :—

Age.	Vaccinated.				Unvaccinated.			
	Admitted.	Discharged	Died.	Case-mortality rate.	Admitted.	Discharged	Died.	Case-mortality rate.
1 to 6 Months	2	2	...	...	13	6	7	53·8
7 to 12 „	1	.....	1	100·0	9	4	5	55·5
1 to 5 Years	24	18	6	25·0	36	28	8	22·2
6 to 10 „	26	23	3	11·5	13	9	4	30·7
Total ...	53	43	*10	18·8	71	47	24	33·8

IV.—Cholera.

10. Cholera prevailed almost all throughtout the year except during March. The sudden and virulent outbreak which occurred in June did not practically cease till the end of August, and sporadic cases continued to be admitted till the end of the year. The following statement shows the admissions, deaths and recoveries among them during 1912 ;—

Month.	Admission.	Died.	Recovered.
January 1912	20	12	8
February „	1	1	.....
March „	.....	.....	.....
April „	7	4	3
May „	44	24	20
June „	211	113	98
July „	65	29	36
August „	58	21	37
September „	11	2	9
October „	13	6	7
November „	1	5	2
December „	38	19	19
Total ...	475	236	239

Treatment of Cholera.

11. No marked departure was made in the line of treatment hitherto adopted at this hospital, the experience of the last epidemic having further confirmed not only the utility of the treatment, but its easy applicability in times of severe stress, without special skilled assistance.

(*a*) The use of the *Cyanide of Mercury* has been attended with marked benefit, both in hospital and private practice. In the latter, many practitioners have exhibited it early, in doses of one-twenty-fourth of a grain every half hour with good results. As much as one grain has been administered within a few hours (in one-tenth grain doses every hour) without any ill-effect. The immediate action of this drug is so well manifested, that scarcely any doubt now remains of its undoubted efficacy in controlling both the vomiting and diarrhœa and in re-establishing biliary secretion, so that the stools lose their characteristic appearance and become bilious. In the large majority of hospital cases admitted in the stage of collapse, a few doses administered every three or four hours, altered the character of the stools; but in private practice its early exhibition not only in cholera, but in all grastro-intestinal inflammatory conditions has been attended with the happiest results. Strong and repeated testimony has been borne to its efficacy by many practitioners during the last epidemic. The best method of administering it is to exhibit small doses ($\frac{1}{12}$th–$\frac{1}{6}$th gr.) every half hour, as soon as diarrhœa and vomiting begin and to continue it till there is decided diminution in the frequency of evacuations, and thereafter at longer intervals as required.

(*b*) The exhibition of a preparation of the Supra-renal gland (*Ext*: *Renaglandin or Adrenalin*) and in very severe cases of *Infundibular* Extract (*Pituitrin*), every three to four hours, raises the tone of the circulation, increases pulse tension, and no doubt helps to promote urinary secretion in combination with the measures detailed below. The above preparations were used subcutaneously in the stage of collapse when rapid action was desired.

(*c*) Subcutaneous injections of camphorated oil (1 in 5) in doses of 1 to 3 c. c. every six to eight hours, have marked effect upon the extreme restlessness of cholera patients, sleep is generally promoted; in addition they have a stimulating action upon the heart and general circulation.

(*d*) Rectal injections of 2–3 pints of Rogers' compound hypertonic saline administered every six hours, if retained wholly or even partly, produce a great and beneficent change in the condition of the patient, with marked improvement in the circulation, re-secretion of urine, and lessening of toxæmia. Whenever rectal injections were wholly rejected, the saline was administered subcutaneously, a pint or two each time and many a life that would otherwise have been lost, was saved by this method.

(*e*) Cupping over the loins, followed by warm poultices to promote and encourage urinary secretion was a further supplementary aid; and, lastly,

(*f*) No alcohol, no milk, black coffee with or without sugar, ice and iced-water were the only nourishment, until reaction was fully established with free secretion of urine.

Results.

12. The efficacy of the above line of treatment was reflected in the results as indicated below :—

The total number of cholera patients treated was 475, of whom 236 died and 239 recovered, giving a case-mortality rate of 49·79 %. If to the above, there are added 72 cases similarly treated during 1910 and 1911, with 25 deaths and 47 recoveries, the gross results stand at 547 cases with 261 deaths and 286 recoveries, the case-mortality rate being 47·7 %, *i.e.*, a recovery rate of over 52 %. These results, however, do not stand alone, for there exists another series of 687 cases treated on the same general principles but with rectal injections of normal saline only, in whom the recovery rate stood at 47 %: so that there is now cumulative evidence of 1,234 cases treated as above, extending over a series of eight years and showing a rate of recovery varying between 47 to 52 %. When these results are considered in the light of the stage in which the patients are usually admitted, the efficacy of the treatment becomes more patent. As on an average only 10 % of the admissions are in the first stage and 90 % in various stages of collapse, with almost uniform suppression of urine, cold and calammy extremities, with the pulse barely perceptible at the wrist in fully 75 % of the cases, it could not be contended that the above treatment was efficacious in mild cases only. Of the 286 recovered cases, 249 (87 %) were in the stage of collapse, and among those, 168 (59 %) had no perceptible pulse at the wrist, in 260 (90 %) urinary secretion was absent. On the other hand, among 261 who succumbed 241 (92·3 %) were in the stage of collapse, 236 (90·42 %) had imperceptible pulse and urine was suppressed in all but one (99·6 %). These facts are enough to show the nature and state of the patients treated.

13. Among the patients who recovered under the above line of treatment, the fever of reaction or secondary, toxæmic fever was markedly absent, the temperature gradually creeping up from sub-normal to normal and oscillating between 98° and 99°, except in a few rare instances, where it rose to about 101° to 102° for a day or two. In 9 cases, urinary secretion after being freely established, became re-suppressed, and not fully established till about the tenth day of illness. One patient had epileptic seizures, and in two instances, cholera supervened on patients suffering from acute lobar pneumonia and acute malaria respectively.

14. The death causes were uræmia 188 (72 %), toxæmia 53 (20 %), sudden heart failure 9 (3·44 %) and pneumonia 11 (4·2 %). The deaths from toxæmia occurred during the later stages of illness than was the case among those from uræmia; grave toxæmia with marasamus was noticed in 8 cases, death supervening at varying periods between eleventh and forty-ninth day of illness. Urine became re-suppressed without resecretion in 22 cases and miscarriage, abortion and retained placenta were responsible for 4 deaths. In some instances surreptitious administration of food by friends was responsible for fatal relapse, whilst in others much difficulty was felt under similar circumstances in bringing round the patients. Violent delirium with heart failure was responsible for one death. Parotitis was an infrequent complication in this epidemic, as it was noticed in 5 fatal cases only.

Bacteriological Examination.

15. The excreta of cholera patients were examined at the Municipal Laboratory by the Municipal Analyst and some by Captain Gloster, I.M.S., at the Parel Laboratory. Cholera vibrios were found in 39 samples out of 63 * examined in the acute stage of illness, and cultural and biological tests were positive in 27 of these. Of the latter 19 recovered and 8 died. There were altogether 10 deaths and 29 recoveries among the positive cases, as compared with 19 recoveries and 5 deaths among the 24 that were found to be negative. Twenty-three observations were made upon the excreta of convalescent patients and in 8 of them only cholera vibrios could be recovered from the eighth to the twenty-third day of illness, the majority being under 14 days and under. In 6 instances, the excreta were examined both in acute and convalescent stages with positive results. In a similar number of cases, although the result was positive in the acute stage, it was negative in the convalescent, and among the rest†, the result was negative in the convalescent stage, there being no examination in the acute stage.

Comparison of Hospital and General Mortality.

16. In the annual report for 1911, it was mentioned that from 1905 to 1911, 6,544 attacks (exclusive of hospital admissions) were recorded in the City with 6,083 deaths equivalent to a case-mortality rate of 92·9 %. During the year under report, there were similarly recorded 1,833 cases with 1,554 deaths, the rate of case-mortality being therefore 84·7 % as compared with 49·7 % among the 475 hospital admissions.

Racial Mortality.

17. The racial mortality among the 574 cases treated during 1910, 1911 and 1912 may be stated as under :—

—	Admissions.	Deaths.	Recoveries.	Case-mortality rate per cent.
Hindus	328	155	168	47·9
Mahomedans	124	63	61	50·8
Native Christians	56	26	30	46·4
Parsees	26	8	18	30·7
Europeans and Eurasians	14	5	9	35·7
Jews	4	4	.....	100

* Some samples of excreta which had been already disinfected, and were not reserved for bacteriological examination happened to be sent inadvertently to the Laboratory; otherwise the ratio of positive results would have been greater.

† Investigations into the problem of cholera "carriers" were extremely difficult to carry out, owing to the great reluctance of patients to remaining in hospital after convalescence. The above results, however, indicate the danger among recovered patients up to a limit of 23 days.

The lowest mortality was therefore exhibited by Parsees. Europeans stood next in order and then Native Christians, Hindus and lastly Mahomedans. It would be instructive to compare the hospital mortality rate with the general mortality as recorded in the City, as it undoubtedly demonstrates the enormous saving in life from hospital treatment:—

	General rate of Mortality.	Hospital rate of Mortality.
Parsees	70·0	30·7
Europeans and Eurasians	54·5	35·7
Native Christians	68·4	46·4
Hindus	89·3	47·9
Mahomedans	77·0	50·8
Jews	100·0	100·0

It thus appears that among Parsees, hospital treatment led to the reduction in the rate of case-mortality by about 40 per cent., among Europeans by about 19 per cent., among Native Christians by about 22 per cent., among Hindus by about 42 per cent., and among Mahomedans by about 27 per cent. These facts are sufficient to demonstrate what hospital treatment could do in saving of human life even in the case of such a severe epidemic.

MORTALITY-RATE BY SEXES AND ACCORDING TO AGE-PERIODS.

18. The rate of mortality among 406 males was 48·5 per cent. and among 141 females 45·4 per cent.

19. Age incidence shows that the mortality is lowest up to the age of 20, varying between 33 to 42 % (except during the first year of life when there were two deaths and two recoveries equivalent to case-mortality rate of 50 per cent). Thereafter it steadily increases from 42 to 47 between the ages of 21 and 40 among whom the incidence of attacks was found to be highest. Between the age of 41 and 50, it was 53 % and in those above 51 the prevailing rate was over 80 %. These figures indicate that the power of resistance to the infection is greatest up to the age of 40, when it begins to decline gradually, but much more so after 50 when the chances of survival are reduced to about 20 % only.

20. In order to cope with the extra work of nursing during the cholera epidemic, all the three permanent Nurses from the Maratha Hospital were temporarily transferred to the Arthur Road Hospital, and the staff was further augmented by three outside Nurses for nursing European patients who were suddenly transferred from the St. George's Hospital without any previous intimation. All these Nurses carried out their duties with great zeal and energy. Resident Hospital Assistant, Mr. A. DeSilva, worked extremely hard and his services have been duly recognized by the Corporation. Hospital Assistant, Mr. Ramkrishna V. Lad, and Temporary Hospital Assistant, Mr. L. C. Kale, also deserve notice for their arduous and exacting work which they carried out to my entire satisfaction. In fact, the whole staff, temporary and permanent, maintained the usual prestige of the Arthur Road Hospital for good and zealous work for which it has been known ever since the first epidemic of plague, 1896-1897.

N. H. CHOKSY, M. D.,
Special Assistant Health Officer,
In-charge Arthur Road Hospital.

ARTHUR ROAD HOSPITAL,
Bombay, 14*th April* 1913.

Report of the Maratha Plague Hospital for the year 1912.

I.—Administration.

1. There were no changes in the staff during the year.

II.—General Statistics.

2. The total number of admissions was 311 as compared with 604 in 1911, and 476 in 1910.

3. The admissions from plague numbered 238, as contrasted with 565 in 1911 and 440 in 1910.

4. The number of admissions for observation was 73 as against 39 last year. There were 67 recoveries and 6 deaths among them.

5. The rate of case-mortality among plague patients was 73·10 per cent. as compared with 74·8 per cent. and 77 per cent. during 1912 and 1911 respectively. The incidence of the disease was considerably less than in any previous year since the outbreak of plague in 1896-97.

6. Two European patients were admitted during the year, both of whom recovered.

III.—The Plague Research Commission.

7. The Plague Research Commission having concluded their observations on the Serum Treatment of Human Plague, the Advisory Committee in London have published * the result of their inquiry. After describing the system adopted in these observations as already described in my previous reports, the results are set out in a series of six tables. In all 444 cases were observed, 222 being treated with serum and 222 being taken as controls.

Table I. summarises the results obtained.

Table I.

Summary of cases grouped by the degree of Septicæmia.

Septicæmia.	Serum. Died.	Serum. Recovered.	Serum. °/₀ died.	Control. Died.	Control. Recovered.	Control. °/₀ died.	Total.	°/₀ died.
0	22	63	25·9	24	46	34·3	155	29·7
+	35	12	74·5	35	12	74·5	94	74·5
++	15	0	100	24	0	100	39	100
+++	75	0	100	81	0	100	156	100
Total ...	147	75	66·2 %	164	58	73·9 %	444	70 %
	222			222				

8. "From this it appears that while 70 per cent of the cases without bacilli in the blood survived, three-fourths of those with a slight degree of septicæmia (+) died, and none of the 195 with higher grades (++ and +++) recovered. The latter may therefore be excluded in the comparison between serum cases and the controls. The percentage fatality in the + group is exactly the same whether serum was used or not, and it is only in the sterile group that any difference in the result is seen. Here in the controls 24 out of 70 died or 34 per cent., while of the similar serum cases only 22 died out of 85, or 26 per cent. The difference therefore is in favour of the serum by some eight cases per hundred, but it is not large enough with such a small number of cases to indicate any definite influence of serum and does not satisfy the customary statistical test for error due to random sampling."

* The Journal of Hygiene, Plague Supplement II; Seventh Report on Plague Investigations in India; January 1913.

9. The above results are further subdivided (Tables II and III) according to the serum used, inasmuch as in 146 cases the ordinary Yersin serum, prepared by the injection of dead and afterwards living bacilli, made by the Lister Institute was used; whereas 76 cases were treated with an antitoxic serum from horses injected with the toxic nucleoproteid of the plague bacillus by Rowland and MacConkey which was of proved efficacy in protecting rats from the injection of living broth cultures of plague bacilli.

TABLE II.

Summary of cases treated with Yersin Serum with the contemporary controls.

	Serum.			Control.			
Septicæmia.	Died.	Recovered.	% died.	Died.	Recovered.	% died.	Total.
0	14	43	24·6	10	31	24·4	98
+	22	8	73·3	32	10	76·2	72
++	62	0	100	16	0	100	28
+++	47	0	100	47	0	100	94
Total ...	95	51	65·1 %	105	41	71·9 %	292
	146			146			

TABLE III.

Summary of cases treated with Antitoxic Serum with the contemporary controls.

	Serum.			Control.			
Septicæmia.	Died.	Recovered.	% died.	Died.	Recovered.	% died.	Total.
0	8	20	28·6	14	15	48·3	57
+	13	4	76·5	5	2	71·4	24
++	3	0	100	6	0	100	9
+++	28	0	100	34	0	100	62
Total ...	52	24	68·4 %	59	17	77·6 %	152
	76			76			

"The Yersin serum shows no indication of any advantage for the serum cases as against its own controls and the reduction of mortality, (10 per cent.) in group 0, as compared with the total controls, is of indefinite significance. In the Antitoxic series, the mortality is a good deal less (20 per cent.) than in the contemporary controls, but the difference is not statistically significant and the exceptionally high mortality among the controls indicate that they are not a fair sample."

10. Table IV compares the average duration of illness in the relevant groups as indicated by the length of their stay in hospital. "Making some allowance for the fact that the convalescence of the serum cases is often somewhat retarded by arthritis and other *serum phenomena*, it appears that in group + the serum cases get better rather sooner than the controls. Otherwise the figures are negative." In Table V there is shown a comparison of the duration of life in fatal cases. "In the grave cases groups + + and + + + life appears to be prolonged by the use of serum, but it is suspicious that this does not seem to be the case in those with no or a slight septicæmia."

11. In Table VI are set forth the details of the cases treated.

12. "*From the whole enquiry therefore it appears that the administration of the available sera is not a practicable means of bringing about any material diminution in the mortality from plague in India.* It may well be that better results would be obtained if the treatment could be commenced within a few hours of the onset of the disease; this, however, is in the great majority of cases, impossible in ordinary hospital practice."

13. The section dealing with this subject concludes as follows:—

> "We are glad to take this opportunity of expressing our indebtedness to Dr. N. H. Choksy without whose cordial encouragement and assistance, this enquiry would have been hardly possible. Dr. Choksy's own observations,* on the serum treatment of plague have extended over many years and he has an unrivalled experience of the matter."

* *See British Medical Journal*, 1908, Vol. I, p. 1282, and the references therein given.

14. The Commission's finding that the administration of the available sera is not a practicable means of bringing about any material diminution in the mortality from plague in India, is what was to be anticipated from our past experience of hospital treatment. No better illustration of the difficulties attendant upon it, could be had than the one provided by the statistics they have published. They go to indicate that out of 444 cases *selected for treatment on clinical grounds*, 195 (44 %) were of such a grave degree of septicæmia, that they all terminated fatally ; 94 cases (21 %) had a slight degree of septicæmia, but they did not appear to be influenced by the serum treatment, and their average fatality was 74 % and in only 155 cases (35 %) without plague bacilli in the blood, whose rate of mortality varied between 24 %—48 % the antitoxic serum alone indicated some appreciable reduction in mortality.

15. It thus appears that about 44 per cent. even from *selected cases* cannot be saved and that a further 21 per cent. remain uninfluenced by serum treatment ; and, if to these were to be added, other advanced and moribund cases that were left out of observation, it would not be difficult to realise how greatly hospital treatment is handicapped, and how the application of sera would not materially affect the mortality. And if such be the result of hospital experience, what chances of a better result would there exist among the very poor who do not resort to hospital under any circumstances and die at their homes with hardly any treatment. One ray of hope however is held out by the Commission when they say that better results would be obtained if the treatment could be commenced within a few hours of the onset of the disease, but unfortunately " that is, in the great majority of cases, impossible in India in ordinary hospital practice."

16. There is no doubt however that the better results obtained in private practice are generally influenced by the administration of serum at an early stage of the disease.

17. The Commission's inquiry has brought out one rather perplexing result in regard to Yersin serum, *viz.*, that in 47 cases without bacilli in the blood, there was no advantage for the serum-treated cases, as compared with an equal number of controls. Considering its undoubted clinical value, as to which all observers are agreed, this result appears rather surprising, and some further inquiry appears to be necessary in order to determine the factors concerned in bringing it about.

N. H. CHOKSY, M.D.,
Special Assistant Health Officer,
in-charge Maratha Plague Hospital.

MARATHA PLAGUE HOSPITAL,
17*th March* 1913.

Meteorological Data (Government Observatory, Colaba), Latitude 18°-53′-45″, North, Longitude 72°-48′-56″, East.

MONTHS.	BAROMETER.	READING OF THERMOMETER.				Mean Maximum Solar Radiation.	Difference between Dew-point Temperature and Mean Air Temperature.	Degree of Humidity, complete Saturation being 100.	Prevailing Direction of Wind.	RAINFALL.		
	Mean Daily Readings.	Maximum.	Minimum.	Mean Daily Range.	Mean Daily Value.					Number of Days on which Rain fell.	Total Fall of Rain during the Month.	Maximum Fall of Rain.
1912.	In.	°	°	°	°	°	°				In.	In.
January	29·978	88·5	66·4	11·1	76·9	125·5	11·9	68	N	.....	.....	.....
February	·915	88·0	66·7	9·1	77·3	124·6	10·8	70	N. W.	.....	.....	.....
March	·877	89·2	70·8	9·5	79·9	125·1	11·0	70	N. W.	.....	.....	.....
April	·832	90·7	76·2	8·9	84·5	128·1	10·2	72	N. W.	.....	.....	.....
May	·778	91·9	79·4	7·9	86·5	130·7	10·2	72	W.	1	0·43	0·43
June...	·649	93·4	76·8	6·1	85·4	124·1	7·6	79	S. W.	15	10·79	4·53
July	·619	87·4	76·9	3·7	82·1	113·1	5·0	85	W. S. W.	29	25·77	7·86
August	·704	85·3	75·5	4·0	81·0	116·3	5·0	85	W. S. W.	29	9·70	1·78
September	·791	87·3	76·4	6·5	81·8	125·5	6·7	77	W.	7	3·09	1·07
October	·848	91·3	74·2	8·0	82·6	127·6	8·6	76	N. N. W.	4	0·65	0·49
November	·887	91·6	68·8	10·4	80·3	126·2	11·8	69	N. N. E.	2	3·62	2·62
December	·957	85·9	68·4	11·4	77·6	126·2	11·7	68	N. N. E.	.....	.....	.....

TABLE showing the Population and the Number of Births and the Birth-rate by Sex and Section in 1912.

1	2	3			4			5			6	7	8	9		
Ward.	Section.	Population according to the Census of 1911.			Number of Births registered.			Ratio of Births per 1,000 of population.			Number of male births to 100 female births.	Excess of births over deaths per 1,000 of Population.	Excess of deaths over births per 1,000 of Population.	Mean ratio of births per 1,000 of population during the previous 5 years.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.
A	Upper Colaba	869	688	1,557	56	42	98	64·44	61·04	62·94	133·33	Nil.	6·42	18·59	50·34	27·01
	Middle and Lower Colaba	13,514	6,165	19,679	142	134	276	10·50	21·73	14·02	105·97	„	15·49	12·64	24·67	16·68
	Fort, South	2,825	637	3,462	18	6	24	6·37	9·41	6·93	300·00	„	9·53	3·86	13·38	5·71
	Fort, North	15,564	9,836	25,400	263	221	484	16·89	22·46	19·05	119·00	„	23·08	16·48	23·89	19·42
	Esplanade	12,544	5,217	17,761	111	89	200	8·84	17·05	11·26	124·27	„	26·80	10·79	22·68	14·31
B	Mandvi	23,317	9,885	33,202	247	240	487	10·59	24·27	14·66	102·91	„	33·37	11·06	16·50	13·10
	Chukla	15,768	8,463	24,231	285	265	550	18·07	31·31	22·69	107·54	„	24·84	15·71	27·68	19·97
	Umarkhadi	28,491	17,188	45,679	618	587	1,205	21·69	34·15	26·37	105·28	„	32·00	17·67	25·19	20·64
	Dongri	16,985	10,261	27,246	337	282	619	19·84	27·48	22·71	119·50	„	31·34	20·76	22·96	21·75
C	Market	22,011	8,161	30,172	161	159	320	7·31	19·48	10·60	101·25	„	17·53	7·57	17·36	10·50
	Dhobi Talao	24,670	14,014	38,684	425	411	836	17·22	29·32	21·61	103·40	„	14·50	16·32	25·33	19·88
	Panaswadi	18,125	9,278	27,403	290	234	524	16·00	25·22	19·12	123·93	„	11·09	12·41	19·95	15·13
	Bhuleshwar	24,713	11,746	36,459	325	291	616	13·15	24·77	16·89	111·68	„	23·36	11·47	20·65	14·57
	Khara Talao	15,052	7,927	22,979	275	210	485	18·26	26·49	21·10	130·95	„	29·76	16·99	28·50	21·22
	Kumbharwada	17,908	9,795	27,703	328	274	602	18·31	27·97	21·73	119·70	„	19·96	15·11	22·76	17·91
D	Khetwadi	19,850	12,087	31,937	342	337	679	17·22	27·88	21·26	101·48	„	10·20	16·05	23·18	18·73
	Girgaum	19,156	11,623	30,779	339	283	622	17·69	24·34	20·20	119·78	„	15·04	14·54	22·10	17·49
	Chowpati	7,088	4,309	11,397	104	113	217	14·67	26·22	19·04	92·03	„	10·09	13·76	18·32	15·58
	Walkeshwar	6,883	3,757	10,640	125	97	222	18·16	25·81	20·86	128·86	„	·28	10·94	22·21	14·74
	Mahalakshmi	16,608	9,694	26,303	305	273	578	18·36	28·16	21·97	111·72	„	12·28	15·82	25·68	19·57
E	Mazagon	19,398	10,677	30,075	404	425	829	20·82	39·80	27·56	95·05	„	15·59	21·48	31·45	25·89
	Tarwadi	18,141	10,283	28,424	434	517	951	23·92	50·27	33·42	83·94	„	34·61	22·58	38·98	28·63
	2nd Nagpada	13,521	8,379	21,700	306	261	567	22·97	31·14	26·12	117·24	„	28·70	21·57	28·61	24·27
	Kamathipura	22,523	14,228	36,751	474	422	896	21·04	29·65	24·38	112·32	„	30·01	20·47	27·07	23·20
	Tardeo	17,241	10,517	27,758	397	332	729	23·02	31·56	26·26	119·57	„	16·60	21·53	28·93	24·54
	Byculla	47,672	27,676	75,348	1,228	1,195	2,423	25·75	43·17	32·15	102·76	„	17·24	25·32	45·46	32·81
	1st Nagpada	4,182	2,232	6,414	64	63	127	15·30	28·22	19·80	101·58	„	18·70	20·18	38·49	26·32
F	Parel	28,858	16,616	45,474	592	583	1,175	20·51	35·08	25·83	101·54	„	11·76	18·40	27·64	21·92
	Sewri	11,841	7,226	19,067	231	234	465	19·50	32·38	24·38	98·71	„	13·37	19·61	28·57	17·04
	Sion	18,463	12,217	30,680	472	406	878	25·56	33·23	28·61	116·25	„	5·80	21·99	30·22	25·27
G	Mahim	18,371	12,221	30,492	484	494	978	26·49	40·42	32·07	97·97	„	3·54	25·69	32·12	28·34
	Worli	58,473	31,138	89,611	891	965	1,856	15·28	30·99	20·71	92·33	„	11·84	20·62	29·52	24·06
	Harbour, Docks, Railways and Homeless.	39,963	5,016	44,979	.....	.....	.....	.....	.....	.....	.....	„	.....	·03	·32	·05
	Total	640,288	339,157	979,445	11,073	10,445	21,518	17·29	30·79	21·96	106·01	.....	17·80	16·76	27·25	20·62

TABLE of Deaths and the Death-rate from some of the Principal Diseases by Sections in 1912.

1	2	3	4	5			6			7	8															9		
				Population by the Census of 1911.			Number of deaths registered.			Number of deaths of males amongst 100 deaths amongst females.	Death-rate per 1,000 of population from													All causes.			Mean Ratio of deaths per 1,000 of population during the previous 5 years.		
Ward.	SECTION.	Area in square miles.	Average population per square mile based on the Census population of 1911.	Males.	Females.	Total.	Males.	Females.	Total.		Cholera.	Small-pox.	Measles.	Plague.	Malaria.	Enteric.	Other fevers.	Diarrhœa and Dysentery.	Tuberculosis.	Phthisis.	Other Respiratory Diseases.	Injuries.	All other causes.	Males.	Females.	Total.	Males.	Females.	Total.
	Upper Colaba ...	·22	7,077	869	688	1,557	68	40	108	170·00	1·28	...	...	1·92	1·28	·64	2·56	10·27	2·56	5·18	12·20	2·56	28·90	78·25	58·13	69·36	20·24	42·33	28·81
	Middle and Lower Colaba.	·45	43,731	13,514	6,165	19,679	326	255	581	127·84	1·72	·20	·15	3·35	·66	·30	1·82	3·30	·40	1·32	7·36	·91	7·97	24·12	41·36	29·52	27·89	39·77	31·94
A.	Fort, South	·21	16,485	2,825	637	3,462	46	11	57	418·18	1·73	·28	...	1·15	1·15	...	1·73	·57	·28	...	2·02	1·15	6·35	16·28	17·26	16·46	16·44	20·08	17·41
	Fort, North	·21	120,952	15,564	9,836	25,400	575	470	1,045	122·84	2·08	·43	...	2·00	1·49	·51	5·03	3·74	1·18	2·99	7·63	·59	13·42	36·94	47·78	41·14	36·44	43·40	39·21
	Esplanade	1·04	17,077	12,544	5,217	17,761	502	174	676	288·50	1·68	·16	·16	·67	1·91	·16	7·93	4·61	1·74	1 01	6·58	8·15	8·27	40·01	33·35	38·06	53·41	57·40	54·59
	Mandvi	·26	127,700	23,317	9,885	33,202	972	623	1,595	156·01	5·27	·36	·27	1·95	·90	·15	4·45	3·28	·51	2·62	14·03	·36	13·85	41·68	63·02	48·03	36·93	41·98	38·85
B.	Chukla	·08	302,887	15,768	8,463	24,231	620	532	1,152	116·54	3·75	·20	·08	1·73	·16	·04	2·55	2·93	·70	3·54	13·37	·61	17·32	39·32	62·86	47·54	34·72	53·78	41·50
	Umerkhadi	·16	285,493	28,491	17,188	45,679	1,498	1,169	2,667	128·14	6·41	·45	·13	3·15	·85	·15	2·60	4·20	1·46	6·06	14·29	·72	17·86	52·57	68·01	58·38	40·81	50·68	44·71
	Dongri	·45	60,546	16,985	10,261	27,246	839	634	1,473	132·33	4·47	·62	1·76	2·81	1.00	·11	4·33	6·56	·95	3·04	15·12	·62	13·10	49·39	61·78	54·06	43·19	40·23	41·86
	Market	·14	215,514	22,011	8,161	30,172	492	357	849	137·81	·92	·62	...	1·36	·26	·19	1·98	2·91	·72	1·22	7·85	·49	9·54	22·35	43·74	28·13	25·01	36·10	28·29
	Dhobi Talao	·16	241,775	24,670	14,014	38,684	769	628	1,397	122·45	2·32	·67	·07	1·65	·33	·49	2·14	5·33	·77	·87	8·81	·87	13·72	31·17	44·81	36·11	36·36	42·65	38·69
C.	Fanaswadi	·20	137,015	18,125	9,278	27,403	478	350	828	136·57	2·22	·91	·07	1·93	·21	·40	1·78	2·62	·69	·72	7·69	·36	10·54	26·37	37·72	30·21	26·93	37·23	30·65
	Bhuleshwar	·12	303,825	24,713	11,746	36,459	798	670	1,468	119·10	1·59	·49	·13	1·91	·21	·08	1·50	4·58	·57	·93	11·54	·49	16·18	32·29	57·04	40·26	35·22	52·64	41·11
	Khara Talao	·07	328,271	15,052	7,927	22,979	656	513	1,169	127·87	1·95	·47	·08	2·80	·56	·08	3·96	4·61	·69	3·26	11·74	·65	20·45	43·58	64·71	50·87	42·45	59·11	48·57
	Kumbharwada	·07	396,757	17,908	9,795	27,703	616	539	1,155	114·28	2·31	·97	·10	1·66	·36	·10	2·41	5·79	·28	2·81	10·93	·43	15·48	34·39	55·02	41·69	31·18	42·85	35·44
	Khetwadi	·27	118,285	19,850	12,087	31,937	537	468	1,005	114·74	1·28	·28	·09	1·37	·25	·25	1·25	2·97	·72	2·84	7·76	·59	11·77	27·05	38·71	31·46	26·70	35·98	30·19
	Girgaum	·20	153,895	19,156	11,623	30,779	583	502	1,085	116·13	2·33	·81	·03	1·75	·09	·32	1·91	2·37	·87	2·59	8·05	·55	13·51	30·38	43·19	35·25	29·81	44·45	33·92
D.	Chowpati	·17	67,041	7,088	4,309	11,397	177	155	332	114·19	·78	·08	·08	1·05	·43	·70	1·22	2·63	·35	2·19	7·54	·43	11·58	24·97	35·97	29·13	22·41	27·38	24·47
	Walkeshwar	·85	12,617	6,882	3,757	10,640	126	99	225	127·27	·84	·37	...	·65	·37	...	·84	1·87	·37	1·12	4·79	·37	9·49	18·30	26·35	21·14	15·98	21·97	17·92
	Mahalakshmi	1·00	26,302	16,608	9,694	26,302	493	408	901	120·83	1·10	·91	·72	1·86	·07	·19	2·81	5·24	·22	1·63	7·94	·34	11·17	29·68	42·08	34·25	24·67	30 74	26·94
	Mazagon	·96	31,328	19,398	10,677	30,075	692	606	1,298	114·19	1·52	2·26	·03	2·32	·13	·16	4·92	6·65	·89	·69	10·37	·63	12·53	35·67	56·75	43·15	40·77	45·89	42·78
	Tarwadi	·75	37,898	18,141	10,283	28,424	1,144	791	1,935	144·62	2·42	1·54	·31	2·53	·77	·14	6·26	11·60	2·63	2·42	13·05	3·30	21·03	63·06	76·92	68·07	52·86	59·93	55·52
	2nd Nagpada	·05	434,000	13,321	8,379	21,700	598	592	1,190	101·01	1·19	·59	·13	·87	·41	·13	4·23	6·72	·69	4·19	14·19	·69	20·73	44·89	70·65	54·83	44·19	61·42	51·10
E.	Kamathipura	·10	367,510	22,525	14,228	36,751	1,019	980	1,999	103·97	1·27	1·25	·43	1·30	·10	...	5·33	5·60	·51	5·25	13·71	·40	19·18	45·24	68·87	54·39	44·17	55·19	48·74
	Tardeo	·36	77,105	17,241	10,517	27,758	626	564	1,190	110·99	1·04	·86	·43	1·08	·14	·10	3·85	6·26	·43	3·74	9·76	·36	14·77	36·30	53·62	42·87	36·05	42·06	38·53
	Byculla	·80	94,185	47,672	27,676	75,348	1,924	1,798	3,722	107·00	1·47	2·42	·22	2·01	·13	·09	3·15	7·81	·39	1·04	13·64	·69	16·27	40·35	64·96	49·39	37·06	52·29	42·71
	1st Nagpada	·05	128,280	4,182	2,232	6,414	135	112	247	120·53	·62	·77	...	·62	·46	·15	2·38	4·05	·77	2·96	10·75	·62	14·34	32·28	50·17	38·50	37·69	48·30	41·25
	Parel	·86	52,876	28,858	16,616	45,474	902	808	1,710	111·63	·63	2·06	·13	2·08	·30	·04	5·27	4·87	·35	1·34	8·26	·76	11·94	31·25	48·62	37·60	29·38	38·55	32·89
F.	Sewri	·77	21,762	11,841	7,226	19,067	360	360	720	100·00	·89	·89	·10	1·25	·20	...	5·61	5·84	·10	1·73	8·39	·62	12·58	30·40	49·32	37·76	31·90	38·10	34·33
	Sion	6·66	4,606	18,463	12,217	30,680	572	484	1,056	118·18	·88	·84	·16	·97	·13	·16	2·77	5·73	·22	1·10	7·59	·52	13·29	30·98	39·61	34·41	32·17	39·33	35·25
	Mahim	2·01	15,170	18,271	12,221	30,492	571	515	1,086	110·87	·26	1·08	·89	2·91	·13	·03	1·88	5·44	·45	2·09	10·13	·68	10·18	31·25	42·14	35·61	30·79	36·65	33·24
G.	Worli	2·84	31,558	58,473	31,136	89,611	1,502	1,415	2,917	106·14	·62	1·68	·18	1·52	·03	·05	2·62	4·36	·13	2·46	8·50	·46	9·98	25·62	45·44	32·55	31·62	42·19	35·70
	Harbour, Docks, Railways and Homeless ...	...	...	39,963	5,016	44,979	113	3	116	...	·22	·26	...	·08	·06	·04	·48	·13	...	...	·46	·28	·51	2·82	·59	2·57	5·05	3·53	4·88
	Total ...	22·55	43,453	640,288	339,157	979,445	21,229	17,625	38,954	121·01	1·82	·99	·21	1·75	·36	·15	3·13	4·63	·62	2·22	9·88	·69	13·24	33·31	51·26	39·77	33·10	44·13	37·15

TABLE of Deaths registered by Section and Month in 1912.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total No. of deaths registered in 1912.
A.	Upper Colaba	6	7	5	12	9	9	14	12	10	13	5	6	108
	Middle and Lower Colaba	51	44	44	60	81	56	46	41	36	52	37	33	581
	Fort, South	4	5	3	2	13	8	3	5	5	4	1	4	57
	Fort, North	91	80	87	103	131	94	85	94	79	67	73	61	1,045
	Esplanade	63	48	51	50	44	70	52	50	49	88	56	55	676
B.	Mandvi	145	111	156	165	94	280	94	93	112	118	121	106	1,595
	Chukla	64	75	108	116	95	200	94	90	76	76	87	71	1,152
	Umarkhadi	210	193	255	262	222	444	212	199	175	173	158	169	2,667
	Dongri	157	127	155	120	111	145	165	130	93	103	87	80	1,473
C.	Market	65	54	75	89	84	73	80	86	58	56	64	65	849
	Dhobi Talao	159	120	116	128	120	125	109	122	98	92	112	96	1,397
	Fanaswadi	98	50	68	85	73	91	79	60	51	50	63	60	828
	Bhuleshwar	99	101	136	163	130	178	142	105	111	86	109	108	1,468
	Khara Talao	113	84	103	91	100	119	109	96	93	93	79	89	1,169
	Kumbharwada	85	82	115	107	106	149	76	91	79	98	82	85	1,155
D.	Khetwadi	82	66	89	97	102	120	75	81	84	64	72	73	1,005
	Girgaum	115	73	88	129	88	121	77	88	83	73	75	75	1,085
	Chowpati	39	27	21	31	29	32	33	35	21	23	24	17	332
	Walkeshwar	26	14	27	33	17	7	25	20	16	15	14	11	225
	Mahalakshmi	85	86	106	100	76	49	107	88	66	51	54	33	901
E.	Mazagon	93	93	131	139	137	101	112	118	107	89	84	94	1,298
	Tarwadi	150	151	153	196	176	131	159	179	145	167	138	180	1,935
	2nd Nagpada	85	91	99	114	97	118	104	98	95	114	74	101	1,190
	Kamathipura	174	156	186	217	191	197	159	149	144	140	140	146	1,999
	Tardeo	88	91	112	132	110	125	92	110	74	67	89	100	1,190
	Byculla	306	310	360	428	338	295	330	337	279	223	260	256	3,722
	1st Nagpada	16	17	19	27	27	26	19	26	18	12	17	23	247
F.	Parel	124	129	141	197	174	130	143	173	155	122	106	116	1,710
	Sewri	46	55	58	69	84	65	57	64	54	46	42	80	720
	Sion	79	70	78	100	80	83	104	116	108	91	82	65	1,056
G.	Mahim	79	90	98	113	115	84	95	101	79	68	87	77	1,086
	Worli	244	245	274	266	265	237	272	310	257	188	162	197	2,917
	Harbour, Docks, Railways and Homeless	19	11	14	7	5	8	10	13	11	3	1	14	116
	Total	3,260	2,956	3,541	3,948	3,524	3,970	3,333	3,380	2,921	2,725	2,650	2,746	38,954

TABLE of Deaths registered from all Causes by Section and Age-Period in 1912.

1	2	3		4		5		6		7		8		9		10		11		12		13		14		15
Ward.	SECTION.	Under 1 year.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		Unspecified.		Total.		Total.
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
A.	Upper Colaba ...	11	7	6	10	...	1	...	...	1	2	16	11	9	5	9	...	9	...	7	4	...	...	68	40	108
	Middle and Lower Colaba ...	60	52	35	32	11	7	10	7	21	19	71	44	53	22	28	22	19	21	18	29	...	...	326	255	581
	Fort, South ...	5	3	...	1	1	1	..	1	2	1	15	3	6	1	5	...	5	...	7	1	...	...	46	11	57
	Fort, North ...	127	75	33	53	8	13	12	15	35	36	109	87	73	51	63	38	54	35	61	67	...	...	575	470	1,045
	Esplanade ...	49	31	28	26	3	5	8	1	37	12	151	34	90	24	44	14	56	18	36	14	...	...	502	174	676
B.	Mandvi ...	160	167	61	72	24	28	42	25	82	58	194	77	137	54	113	45	75	37	82	62	2	...	972	623	1,595
	Chukla ...	143	116	57	73	16	26	14	19	54	67	101	76	73	46	56	31	49	27	52	51	...	...	620	532	1,152
	Umarkhadi ...	318	258	167	140	46	49	50	46	94	112	271	193	159	117	123	62	125	68	145	124	...	...	1,498	1,169	2,667
	Dongri ...	218	199	117	121	33	21	26	24	49	37	175	63	92	45	57	38	37	38	39	48	1	...	839	634	1,473
C.	Market ...	100	89	36	40	7	11	12	18	29	27	108	59	61	33	46	15	53	32	39	33	1	...	492	357	849
	Dhobi Talao ...	156	162	71	62	10	26	22	20	62	58	140	100	94	56	75	44	67	36	72	64	...	...	769	628	1,397
	Fanaswadi ...	105	79	46	34	9	9	17	16	43	30	97	58	46	37	50	16	28	18	37	33	...	...	478	360	838
	Bhuleshwar ...	158	142	67	66	17	21	31	32	59	78	126	114	103	72	75	30	81	50	76	70	...	...	798	670	1,468
	Khara Talao ...	182	96	63	55	18	18	15	36	46	54	96	101	80	49	75	27	53	25	78	53	...	...	656	513	1,169
	Kumbharwada ...	159	150	63	64	14	22	14	9	43	39	120	99	78	46	62	23	36	26	42	61	...	...	616	539	1,155
D.	Khetwadi ...	128	105	53	56	10	9	17	12	37	31	93	74	73	49	40	31	37	25	51	76	...	...	537	468	1,005
	Girgaum ...	138	114	46	78	17	10	14	16	53	60	134	77	63	36	53	32	32	23	44	56	...	...	583	502	1,085
	Chowpati ...	42	35	16	24	3	7	4	2	14	10	26	32	14	7	12	10	20	13	26	14	...	...	177	155	332
	Walkeshwar ...	36	30	8	12	1	3	1	4	9	7	25	14	18	7	7	2	9	7	12	13	...	...	126	99	225
	Mahalakshmi ...	138	110	79	71	12	18	23	14	30	25	68	68	52	33	42	23	28	19	36	32	...	...	493	408	901
E.	Mazagon ...	167	192	65	83	14	24	16	12	58	35	122	80	88	42	57	29	44	44	61	65	...	...	692	606	1,298
	Tarwadi ...	244	294	89	104	30	16	35	18	78	36	238	109	183	61	114	51	77	44	55	58	2	...	1,144	791	1,935
	2nd Nagpada ...	138	134	58	66	20	26	9	28	34	42	92	127	74	35	57	31	44	35	32	68	...	...	598	592	1,190
	Kamathipura ...	251	247	152	145	27	37	28	35	57	78	173	158	142	77	76	56	46	51	71	96	1	...	1,019	980	1,999
	Tardeo ...	133	154	87	112	18	36	16	23	43	32	80	74	69	31	45	30	28	23	57	49	...	...	626	564	1,190
	Byculla ...	581	489	260	327	51	93	56	68	114	123	311	254	206	143	138	75	120	94	137	131	...	1	1,924	1,798	3,722
	1st Nagpada ...	25	34	31	17	3	5	6	...	10	8	21	19	20	10	13	5	9	6	15	8	...	...	185	112	297
F.	Parel ...	253	240	115	138	31	41	25	23	70	53	144	110	98	57	57	31	46	48	62	77	1	...	902	808	1,710
	Sewri ...	114	136	39	52	15	16	10	3	24	15	66	48	39	27	16	16	18	16	19	31	...	...	360	360	720
	Sion ...	185	151	74	87	12	21	11	9	26	24	82	73	56	34	50	36	31	24	45	45	...	...	572	484	1,056
G.	Mahim ...	136	150	66	79	23	25	24	22	41	22	81	68	61	39	59	23	41	31	39	56	...	...	571	515	1,086
	Worli ...	419	418	218	252	45	57	56	36	132	81	217	214	154	103	107	45	79	80	94	129	1	...	1,502	1,415	2,917
	Harbour, Docks, Railways and Homeless	...	...	1	...	2	...	3	...	9	...	36	...	25	...	17	...	6	2	13	1	1	...	113	3	116
	Total ...	5,004	4,642	2,283	2,542	551	697	622	594	1,496	1,307	3,799	2,717	2,562	1,449	1,830	929	1,457	1,008	1,710	1,739	10	1	21,329	17,625	38,954
	Persons ...	9,646		4,830		1,248		1,216		2,803		6,516		4,011		2,759		2,465		3,449		11		38,954		..
	Percentages to Total Mortality ...	24·76		12·39		3·20		3·12		7·19		16·72		10·29		7·08		6·32		8·85		·02		100·00		

6

TABLE showing the Population, the Number of Deaths from all Causes and the

1	2	3													
		Population by the Census of 1911.													
Ward.	SECTION.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other castes.	Hindus, low caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and Unknown Castes.	Total.
A.	Upper Colaba ...	15	68	...	...	521	533	98	104	4	113	45	56	...	1,557
	Middle and Lower Colaba.	149	169	69	2	11,094	1,690	1,190	1,085	170	1,760	223	2,037	41	19,679
	Fort, South ...	...	31	7	...	1,460	247	166	96	93	821	55	486	...	3,462
	Fort, North ...	800	1,075	2	1,497	7,779	1,358	1,440	9,692	12	1,378	155	167	45	25,400
	Esplanade ...	1	270	...	32	6,004	5,556	3,019	503	55	967	248	1,062	44	17,761
B.	Mandvi ...	2,562	2,387	16	1,659	20,360	194	5,217	9	541	186	8	20	43	33,202
	Chukla ...	765	690	...	160	7,333	34	15,082	74	...	34	...	9	...	24,231
	Umarkhadi ...	1,158	351	8	60	11,916	788	29,280	38	1,871	640	39	22	8	45,679
	Dongri ...	351	250	35	8	22,092	1,222	2,571	24	436	166	13	72	3	27,346
C.	Market ..	4,489	3,514	91	2,112	14,032	75	3,415	1,206	...	1,111	62	28	37	30,172
	Dhobi Talao ...	881	2,547	52	1,166	16,226	1,308	1,015	8,619	1	6,461	98	263	12	38,684
	Fanaswadi ...	520	5,104	28	46	16,162	796	502	2,005	2	2,181	7	41	9	27,403
	Bhuleshwar ...	1,949	5,084	...	79	17,194	29	11,377	715	...	28	1	3	...	36,459
	Khara Talao ...	471	173	26	6	5,967	158	15,938	171	28	40	1	...	...	23,979
	Kumbharwada ..	391	847	161	33	23,016	38	2,822	326	3	65	1	...	...	27,706
D.	Khetwadi ...	167	3,443	49	111	15,727	245	3,643	7,326	36	1,937	25	62	16	31,937
	Girgaum ...	378	10,079	36	32	18,184	48	295	582	1	1,910	74	60	...	30,779
	Chowpati ...	191	2,266	...	45	7,224	2	331	859	5	444	4	25	1	11,397
	Walkeshwar ..	275	1,023	14	170	5,888	269	677	1,117	14	831	27	271	64	10,640
	Mahalakshmi ..	34	1,933	18	119	17,191	694	887	4,049	16	1,228	2	131	...	26,302
E.	Mazagon ...	237	411	7	...	18,487	1,235	4,562	1,243	38	3,114	292	413	39	30,075
	Tarwadi ...	200	547	20	6	18,914	1,502	3,080	990	600	1,219	667	678	1	28,424
	2nd Nagpada ...	67	66	...	...	5,309	905	14,690	82	374	196	1	7	3	21,700
	Kumathipura ..	364	825	75	19	21,268	5,432	7,742	174	137	528	61	51	72	36,751
	Tardeo ..	246	810	8	4	12,652	4,209	4,859	3,815	72	884	96	29	74	27,758
	Byculla ..	783	1,348	30	3	42,470	7,831	16,556	833	906	2,720	904	961	3	75,348
	1st Nagpada ..	120	347	4	...	2,796	50	1,233	46	808	606	282	121	1	6,414
F.	Parel ...	592	1,356	115	28	36,596	1,785	2,192	1,681	96	829	89	111	6	45,474
	Sewri ...	201	212	19	...	16,172	919	992	42	7	423	18	62	...	19,067
	Sion ..	459	1,849	30	238	19,489	3,085	2,412	738	21	2,191	92	114	2	30,680
G.	Mahim ...	410	1,230	54	31	20,498	927	3,609	550	40	2,913	103	125	2	30,492
	Worli ...	915	2,374	189	46	65,875	8,666	4,859	1,918	683	3,393	294	399	...	89,611
	Harbour, Docks, Railways and Homeless.	319	977	15	68	21,276	2,405	13,560	229	30	1,706	198	4,008	188	44,979
	Total ..	20,460	53,656	1,179	7,780	547,192	54,235	179,346	50,931	6,597	41,273	4,188	11,894	714	979,445

Death-rate per 1,000 of population by Class and Section in 1912.

4													5										
Number of Deaths from all Causes excluding Still-born.													Death-rate per 1,000 of population among :—										
Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other castes.	Hindus, low caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and unknown castes.	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other castes.	Hindus, low caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Other and unknown castes.	Total.
...	1	...	...	19	33	7	9	...	8	6	26	...	109	.....	14·70	...	...	9·46	60·66	71·43	88·33	...	70·79	39·33	464·28	.....	69·36
10	3	2	...	337	94	45	15	...	28	1	48	...	581	67·11	17·75	28·98	...	30·37	55·58	37·81	11·98	...	13·90	5·48	23·56	.....	29·82
...	...	...	...	14	8	4	1	2	12	2	13	...	57	.....	...	...	...	9·38	29·38	24·09	10·41	21·30	14·61	9·54	26·74	.....	16·46
93	38	...	59	375	130	92	292	3	43	6	7	...	1,045	115·00	35·34	...	39·41	35·38	102·35	63·88	30·12	250·00	30·47	9·70	41·91	.....	41·14
5	8	...	3	262	140	186	6	...	31	5	28	2	676	.....	29·62	...	...	24·84	38·19	61·60	11·92	...	32·05	9·16	26·36	45·45	26·06
294	142	...	65	814	22	304	...	28	10	...	3	3	1,595	79·62	39·48	...	39·18	33·96	113·40	58·27	...	31·75	53·76	...	156·60	69·76	48·93
74	16	...	5	186	13	859	...	...	...	...	...	...	1,152	90·73	23·18	...	31·25	24·19	352·94	56·95	...	...	...	...	...	.....	37·54
36	13	..	1	515	63	1,921	2	64	29	1	2	...	2,667	48·35	37·03	...	16·66	43·21	79·94	65·00	32·63	45·66	45·21	7·64	20·20	.....	58·35
23	10	1	...	990	283	149	1	16	3	...	3	1	1,475	71·22	40·00	26·31	...	44·61	231·58	54·45	41·66	56·60	18·87	...	41·66	333·33	54·06
138	99	...	54	302	4	115	43	...	33	1	...	...	849	44·10	28·17	...	25·56	21·52	53·33	33·67	35·05	...	29·70	9·12	...	.....	28·13
41	73	3	43	543	104	98	247	...	280	1	4	1	1,397	46·53	28·66	57·69	37·19	23·40	79·81	37·14	28·65	...	43·33	4·20	15·20	83·33	36·11
49	133	...	1	502	94	23	43	...	43	...	1	...	828	94·25	25·95	...	21·73	31·06	42·71	42·81	20·94	...	19·71	...	24·39	.....	30·21
289	110	...	6	425	42	580	14	...	2	...	...	...	1,468	148·28	21·63	...	75·94	24·71	...	56·98	19·38	...	72·42	...	...	.....	40·26
20	7	...	...	209	69	857	3	...	3	...	...	1	1,169	42·46	40·46	...	...	35·92	456·70	52·17	17·54	...	75·00	...	...	.....	50·87
27	23	13	2	891	68	118	9	...	3	...	...	1	1,155	69·05	37·15	89·74	66·66	34·71	...	41·81	27·60	...	46·15	...	...	.....	41·69
23	70	3	5	526	20	137	180	...	29	...	1	1	1,095	197·00	20·33	61·72	45·94	33·44	81·63	37·69	24·57	...	29·67	...	16·12	62·25	31·16
50	226	...	2	722	9	17	14	...	35	...	...	1	1,025	152·37	23·41	...	62·50	30·70	166·66	57·62	24·05	...	34·65	...	...	.....	35·25
14	36	...	2	232	1	8	31	...	7	...	...	1	332	73·29	15·88	...	44·44	32·11	500·00	24·16	36·08	...	159·09	...	...	1,000·00	29·13
10	21	...	6	126	14	12	26	...	10	...	...	...	225	36·36	30·32	...	35·29	23·54	52·04	17·79	23·27	...	12·05	...	...	.....	21·14
7	16	1	7	496	235	30	91	...	18	...	...	...	901	205·88	8·27	55·55	38·82	21·65	338·61	33·82	22·47	...	14·65	...	...	.....	24·25
16	19	2	...	811	56	209	57	1	118	8	20	1	1,298	67·51	46·22	285·71	...	45·86	45·34	45·81	29·76	40·00	37·89	17·39	48·42	25·64	43·15
16	11	3	...	1,072	154	337	11	19	282	16	31	3	1,955	80·00	30·10	150·00	...	58·67	89·21	109·41	11·11	31·66	231·23	13·98	45·72	.....	68·07
4	2	...	...	91	237	834	1	16	13	1	1	...	1,190	59·70	50·50	...	...	17·14	350·82	58·77	12·19	43·78	66·92	100·00	142·85	.....	54·83
11	37	70	...	1,033	495	317	3	4	35	1	1	2	1,999	39·21	52·72	933·33	...	49·57	91·12	40·94	17·24	29·19	66·28	15·62	19·60	37·02	54·39
9	18	1	...	421	377	230	99	2	29	5	...	1	1,190	36·54	22·22	125·00	...	33·27	89·86	47·38	25·95	37·77	82·80	31·25	..	13·51	42·87
28	50	9	...	1,635	752	959	18	47	138	39	37	2	3,723	35·75	37·69	300·00	...	38·93	86·02	57·93	21·60	15·87	50·74	13·14	28·69	666·66	49·29
5	9	...	...	102	6	53	...	24	33	3	7	...	347	41·66	29·03	...	...	39·36	120·00	42·98	...	39·70	54·45	10·63	37·85	.....	38·50
23	33	6	1	1,365	169	110	50	2	41	6	2	2	1,710	38·85	24·33	85·00	20·71	21·56	94·67	50·18	28·07	39·83	49·45	67·41	18·01	333·33	37·60
8	13	1	...	579	52	49	2	...	15	...	1	...	720	39·40	61·32	52·63	...	35·80	56·38	49·39	47·61	...	35·48	...	16·12	.....	37·76
31	56	1	4	353	201	109	16	1	83	1	1	...	1,056	67·83	30·28	33·33	16·80	28·41	93·15	45·19	21·97	47·61	37·42	19·86	8·77	.....	34·11
23	35	2	1	516	241	167	18	...	77	4	1	1	1,086	56·99	28·45	37·03	32·25	25·17	259·97	46·27	32·72	...	36·43	38·83	8·66	166·66	35·61
36	63	20	2	1,787	673	157	33	25	92	10	15	2	2,917	39·24	26·53	105·83	43·47	37·12	73·65	32·31	18·24	56·63	37·11	24·01	37·09	.....	32·55
...	...	...	...	45	1	53	...	...	3	...	12	2	116	...	...	...	...	2·11	·41	3·06	...	...	1·75	...	2·29	10·63	2·81	
1,414	1,291	138	289	18,318	4,776	9,097	1,314	254	1,584	116	255	28	38,954	69·11	25·92	117·04	34·57	33·47	88·03	50·72	25·79	28·50	38·37	27·69	21·43	30·21	35·77

TABLE of Deaths registered from CHOLERA by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.			Death Ratio per 1,000 of population.			Mean Ratio per 1,000 of population during the previous 5 years.
														Males.	Females.	Total.	Males.	Females.	Total.	
A	Upper Colaba	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2	...	...	1·38	.....
	Middle and Lower Colaba	...	...	...	...	18	6	3	4	...	3	...	...	...	...	34	...	...	1·72	·30
	Fort, South	...	...	...	...	3	3	...	1	...	...	...	...	...	...	6	...	...	1·73	·25
	Fort, North	...	...	...	3	32	6	5	5	...	1	1	...	...	...	53	...	...	2·08	·28
	Esplanade	...	...	...	...	4	17	3	...	...	1	...	3	...	...	29	...	...	1·63	·56
B	Mandvi	...	...	2	...	4	154	11	2	...	...	1	...	...	...	175	...	...	5·27	·24
	Chukla	...	...	...	...	...	76	11	2	2	..	...	...	...	...	91	...	...	3·75	·21
	Umarkhadi	...	...	...	...	3	248	22	4	6	...	...	8	...	...	293	...	...	6·41	·28
	Dongri	...	...	...	1	2	54	48	14	1	...	1	1	...	...	122	...	...	4·47	·41
C	Market	...	...	...	1	...	15	8	2	...	...	...	2	...	...	28	...	...	·92	·37
	Dhobi Talao	...	...	...	...	6	24	8	6	3	2	3	5	...	...	90	...	...	2·32	·48
	Fanaswadi	...	...	...	1	...	19	13	2	...	1	...	2	...	...	61	...	...	2·32	·38
	Bhuleshwar	...	...	...	2	...	44	10	1	1	...	...	...	...	...	58	...	...	1·59	·52
	Khara Talao	...	...	...	...	2	26	8	2	...	3	...	4	...	...	45	...	...	1·95	·23
	Kumbharwada	...	...	...	...	6	46	6	1	...	2	...	2	...	...	64	...	...	2·31	·40
D	Khetwadi	...	...	...	...	7	17	3	4	...	1	...	2	...	...	41	...	...	1·28	·21
	Girgaum	...	...	...	3	1	25	6	9	3	1	...	3	...	...	72	...	...	2·33	·55
	Chowpati	...	...	...	1	1	2	1	1	...	1	...	...	...	...	9	...	...	·78	·39
	Walkeshwar	...	...	...	1	1	...	2	2	...	...	1	...	...	...	9	...	...	·84	·24
	Mahalakshmi	...	...	...	...	2	3	16	5	...	...	...	1	...	...	29	...	...	1·10	·33
E	Mazagon	...	1	...	2	4	15	10	11	...	...	1	2	...	...	46	...	...	1·52	·26
	Tarwadi	...	3	...	1	3	22	19	14	...	...	...	7	...	...	69	...	...	2·42	·18
	2nd Nagpada	...	...	...	...	2	13	3	...	1	...	...	2	...	...	26	...	...	1·19	·04
	Kamathipura	...	...	...	1	2	29	3	2	1	...	...	9	...	...	47	...	...	1·27	·16
	Tardeo	...	...	...	...	1	17	4	7	...	...	...	...	...	...	29	...	...	1·04	·24
	Byculla	...	...	...	6	6	35	27	17	2	4	...	9	...	...	111	...	...	1·47	·23
	1st Nagpada	...	...	...	...	...	1	1	...	...	...	...	2	...	...	4	...	...	·62	·50
F	Parel	...	...	...	1	5	10	5	4	1	...	2	1	...	...	23	...	...	·63	·27
	Sewri	...	...	...	...	...	8	5	1	...	...	...	8	...	...	17	...	...	·89	·13
	Sion	...	1	...	...	1	5	6	10	3	...	1	1	...	...	27	...	...	·88	26
G	Mahim	...	1	...	...	...	3	1	1	...	...	1	1	...	...	8	...	...	·26	·51
	Worli	...	1	1	...	5	15	13	14	3	1	...	4	...	...	56	...	...	·62	·29
	Harbour, Docks, Railways and Homeless	...	...	...	...	1	3	2	1	3	...	...	...	...	...	10	...	...	.22	·17
	Total	98	7	3	24	123	961	283	150	29	21	12	79	1,207	583	1,790	1·88	1·71	1·82	·30

TABLE of Deaths registered from SMALL-POX by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 population during the previous 5 years.
A.	Upper Colaba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Middle and Lower Colaba	...	...	...	3	1	...	...	...	...	...	...	...	...	...	4	...	...	·20	·30
	Fort, South	...	...	1	...	...	...	...	...	...	..	...	...	...	...	1	...	...	·28	·25
	Fort, North	1	1	3	3	1	2	...	...	...	...	...	...	...	...	11	...	...	·43	·49
	Esplanade	...	...	1	2	...	...	...	...	...	...	...	...	...	...	3	...	...	·16	·56
B.	Mandvi	...	...	4	2	2	3	1	...	...	...	...	...	...	...	12	...	...	·36	·37
	Chukla	...	...	2	1	1	1	...	...	...	...	...	...	...	...	5	...	...	·20	·28
	Umarkhadi	...	...	5	6	7	1	2	...	...	...	...	...	...	...	21	...	...	·45	·57
	Dongri	...	2	3	7	5	...	...	...	...	...	...	...	...	...	17	...	...	·62	·34
C.	Market	...	...	10	3	2	3	...	1	...	...	...	...	...	...	19	...	...	·62	·43
	Dhobi Talao	...	3	8	5	6	2	2	...	...	...	...	...	...	...	26	...	...	·67	1·13
	Fanaswadi	...	..	5	5	6	6	2	...	...	...	...	1	...	...	25	...	...	·91	·72
	Bhuleshwar	...	2	3	6	5	1	1	...	...	...	...	...	...	...	18	...	...	·49	·42
	Khara Talao	...	...	1	1	4	3	1	...	...	1	...	...	...	...	11	...	...	·47	·49
	Kumbharwada	...	2	12	5	3	3	1	1	...	...	...	...	...	...	27	...	...	·97	·66
D.	Khetwadi	...	1	4	3	...	...	...	1	...	...	...	...	...	...	9	...	...	·28	·54
	Girgaum	...	...	2	6	6	4	6	1	...	...	...	...	...	...	25	...	...	·81	·93
	Chowpati	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·08	·39
	Walkeshwar	...	...	...	1	...	1	1	1	...	...	...	...	...	...	4	...	...	·37	·08
	Mahalakshmi	6	2	5	7	4	...	...	...	...	...	...	...	...	...	24	...	...	·91	·52
E.	Mazagon	3	8	9	16	13	11	4	3	1	...	...	...	...	...	68	...	...	2·26	·58
	Tarwadi	2	2	12	12	7	3	3	2	1	...	...	...	...	...	44	...	...	1·54	·63
	2nd Nagpada	1	2	3	4	2	...	...	...	...	1	...	...	...	...	13	...	...	·59	·50
	Kamathipura	...	4	11	13	9	7	1	...	1	...	...	...	...	...	46	...	...	1·26	·93
	Tardeo	...	3	4	5	7	4	...	...	1	...	...	...	...	...	24	...	...	·86	·71
	Byculla	4	24	45	53	38	12	6	1	...	...	...	...	...	...	183	...	...	2·42	·91
	1st Nagpada	...	1	...	4	...	...	...	...	...	...	...	...	...	...	5	...	...	·77	1·01
F.	Parel	3	9	16	35	24	5	...	1	...	...	...	1	...	...	94	...	...	2·06	·79
	Sewri	...	...	2	7	1	2	2	...	...	2	...	1	...	...	17	...	...	·89	·48
	Sion	2	1	3	5	5	3	4	2	...	...	...	1	...	...	26	...	...	·84	·58
G.	Mahim	6	5	10	8	...	1	3	...	...	...	...	...	...	..	33	...	...	1·08	·28
	Worli	23	36	47	24	10	7	2	1	...	...	...	1	...	...	151	...	...	1·68	·82
	Harbour, Docks, Railways and Homeless	4	6	...	1	...	...	1	...	...	...	...	...	...	...	12	...	...	·26	·51
	Total	54	114	230	253	171	84	45	15	4	4	...	5	540	439	979	·84	1·29	·99	·62

TABLE of Deaths registered from MEASLES by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Middle and Lower Colaba	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3	...	...	·15	·06
	Fort, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Fort, North	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·17
	Esplanade	...	...	...	...	2	1	...	...	...	...	...	...	...	...	3	...	...	·16	·08
B	Mandvi	2	1	3	2	...	...	...	1	...	...	...	...	...	...	9	...	...	·27	·26
	Chukla	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	·08	·38
	Umarkhadi	...	1	1	2	2	...	...	...	...	...	...	...	...	...	6	...	...	·18	·55
	Dongri	20	10	6	10	1	...	1	...	...	...	...	...	...	...	48	...	...	1·76	·44
C	Market	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·14
	Dhobi Talao	...	...	...	...	...	2	...	...	...	...	1	...	...	...	3	...	...	·07	·35
	Fanaswadi	...	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	·07	·34
	Bhuleshwar	...	1	1	1	1	...	1	...	...	...	...	...	...	...	5	...	...	·18	·42
	Khara Talao	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	·08	·38
	Kumbharwada	...	1	...	1	1	...	...	...	...	...	...	...	...	...	3	...	...	·10	·59
D	Khetwadi	...	...	1	1	1	...	...	...	...	...	...	...	...	...	3	...	...	·09	·18
	Girgaum	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·03	·24
	Chowpati	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·08	·07
	Walkeshwar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mahalakshmi	5	10	1	...	...	...	...	...	1	1	1	...	...	...	19	...	...	·72	·20
E	Mazagon	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·03	·26
	Tarwadi	1	...	2	4	2	...	...	...	...	...	...	...	...	...	9	...	...	·31	·44
	2nd Nagpada	...	1	1	1	...	...	...	...	...	...	...	...	...	...	3	...	...	·13	·45
	Kamathipura	...	3	8	4	1	...	...	...	...	...	...	...	...	...	16	...	...	·43	·21
	Tardeo	1	1	3	4	2	...	...	...	...	...	1	...	...	...	12	...	...	·43	·21
	Byculla	...	2	5	4	4	2	...	...	...	...	...	...	...	...	17	...	...	·22	·36
	1st Nagpada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·50
F	Parel	...	...	1	...	...	...	1	2	...	...	1	1	...	...	6	...	...	·13	·49
	Sewri	...	...	...	...	1	...	...	...	...	...	1	...	...	...	2	...	...	·10	·30
	Sion	...	...	...	...	...	...	...	1	...	2	1	1	...	...	5	...	...	·16	·26
G	Mahim	1	3	4	1	2	...	1	...	...	...	...	...	...	...	12	...	...	·39	·22
	Worli	2	2	1	2	2	1	1	1	2	1	1	1	...	...	17	...	...	·18	·73
	Harbour, Docks, Railways and Homeless	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	33	38	44	39	22	7	5	5	3	4	7	3	108	104	210	·16	·30	·21	·34

TABLE of Deaths registered from PLAGUE by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females	Total. Total.	Death Ratio per 1,000 of population. Males.	Females	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	1	1	...	...	...	...	...	...	1	...	...	3	...	...	1·92	1·80
	Middle and Lower Colaba	5	4	5	6	7	4	9	9	7	6	3	1	...	...	66	...	...	3·35	6·80
	Fort, South	...	...	...	...	4	...	...	...	...	...	...	...	...	...	4	...	...	1·15	3·63
	Fort, North	...	...	8	20	11	...	5	6	...	1	...	...	...	...	51	...	...	2·00	4·41
	Esplanade	1	...	3	2	1	3	...	1	...	...	...	2	...	...	12	...	...	·67	2·63
B	Mandvi	...	1	10	29	12	1	1	1	2	...	7	1	...	...	65	...	...	1·95	5·73
	Chukla	1	4	13	15	6	1	1	1	...	...	...	...	...	...	42	...	...	1·73	5·08
	Umarkhadi	2	11	43	45	29	4	3	3	...	...	3	1	...	...	144	...	...	3·15	5·43
	Dongri	...	7	19	18	9	7	1	...	..	1	1	...	...	...	68	...	...	2.31	5·47
C	Market	...	...	2	9	12	1	3	10	2	...	...	2	...	...	41	...	...	1·35	4·87
	Dhobi Talao	3	4	20	17	12	4	2	...	2	...	...	...	...	...	64	...	...	1·65	7·18
	Panaswadi	1	1	6	17	13	8	4	...	1	1	...	1	...	...	53	...	...	1·93	6·82
	Bhuleshwar	...	2	6	26	17	8	5	3	2	...	1	...	...	...	70	...	...	1·91	7·24
	Khara Talao	1	5	12	14	13	2	1	...	2	1	1	2	...	...	53	...	...	2·30	6·00
	Kumbharwada	1	...	10	18	7	6	1	1	...	...	2	...	...	...	46	...	...	1·66	5·19
D	Khetwadi	1	2	10	17	8	2	...	...	1	...	1	2	...	...	44	...	...	1·37	3·27
	Girgaum	...	2	8	28	12	...	3	...	1	...	...	...	...	...	54	...	...	1·75	3·42
	Chowpati	...	1	1	7	3	...	...	...	...	...	...	...	...	...	12	...	...	1·05	3·85
	Walkeshwar	...	...	4	1	1	1	...	...	...	...	...	...	...	...	7	...	...	·65	2·36
	Mahalakshmi	1	4	16	30	4	2	2	...	...	...	...	...	...	...	49	...	...	1·86	3·36
E	Mazagon	2	2	10	23	23	3	5	2	...	1	...	...	...	...	70	...	...	2·32	7·61
	Tarwadi	1	...	15	32	15	5	2	...	1	...	...	1	...	...	72	...	...	2·53	5·49
	2nd Nagpada	...	2	5	8	3	...	1	...	...	...	...	...	...	...	19	...	...	·87	3·91
	Kamathipura	1	5	4	22	11	2	...	1	1	1	...	...	...	...	48	...	...	1·30	4·59
	Tardeo...	...	2	5	16	5	1	...	1	...	...	...	...	...	...	30	...	...	1·08	3·84
	Byculla	8	21	35	74	10	3	...	1	...	...	...	...	...	...	152	...	...	2·01	5·63
	1st Nagpada	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4	...	...	·62	3·79
F	Parel	...	9	13	37	29	...	...	3	1	3	...	...	...	...	95	...	...	2·08	4·80
	Sewri	...	...	...	4	...	4	1	6	5	1	...	3	...	...	24	...	...	1·25	7·16
	Sion	1	3	5	6	1	2	1	3	3	2	2	1	...	...	30	...	...	·97	4·32
G	Mahim	1	5	8	45	26	3	...	...	...	...	...	1	...	...	89	...	...	2·91	4·70
	Worli	1	4	8	30	13	17	10	7	10	1	...	6	...	...	137	...	...	1·62	5·75
	Harbour, Docks, Railways and Homeless	1	...	2	...	1	...	...	...	...	...	...	...	...	...	4	...	...	·08	·11
	Total	33	101	306	611	348	92	61	59	41	19	21	25	1,190	527	1,717	1·85	1·55	1·75	5·03

TABLE of Deaths registered from MALARIA by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A	Upper Colaba	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2	...	...	1·28	·60
	Middle and Lower Colaba	1	...	...	1	...	1	1	...	2	1	4	2	...	...	13	...	...	·66	·49
	Fort, South	...	...	...	...	...	1	...	...	...	1	...	2	...	...	4	...	...	1·16	·51
	Fort, North	5	...	4	2	3	2	3	3	2	3	6	5	...	...	38	...	...	1·49	·96
	Esplanade	2	1	2	2	1	4	...	...	2	9	3	3	...	...	34	...	...	1·91	2·34
B	Mandvi	2	1	1	2	2	...	...	...	2	12	6	2	...	...	30	...	...	·90	·82
	Chukla	1	...	...	...	...	...	...	...	...	1	2	...	...	...	4	...	...	·16	·21
	Umarkhadi	5	4	5	1	6	4	4	3	1	2	1	3	...	...	39	...	...	·85	·61
	Dongri	1	3	5	2	..	3	1	6	2	4	1	...	...	...	28	...	...	1·00	1·01
C	Market	...	1	...	...	...	3	1	2	...	...	1	...	...	...	8	...	...	·26	·82
	Dhobi Talao	...	2	1	2	1	2	2	1	...	1	1	...	...	...	13	...	...	·38	·29
	Fanaswadi	...	...	...	1	...	...	...	2	...	1	1	1	...	...	6	...	...	·21	·17
	Bhuleshwar	1	1	2	1	...	1	1	...	...	...	...	1	...	...	8	...	...	·21	·26
	Khara Talao	3	...	...	...	1	1	2	...	1	...	3	2	...	...	13	...	...	·56	·26
	Kumbharwada	...	...	3	2	...	...	...	...	...	2	1	2	...	...	10	...	...	·36	·06
D	Khetwadi	...	1	1	1	...	...	...	...	2	...	2	1	...	...	8	...	...	·25	·21
	Girgaum	...	...	1	...	...	...	...	...	...	1	...	1	...	...	3	...	...	·09	·27
	Chowpati	...	...	1	...	2	...	1	...	1	...	...	...	...	...	5	...	...	·48	·31
	Walkeshwar	...	...	2	...	...	...	...	1	1	...	...	...	...	...	4	...	...	·37	·32
	Mahalakshmi	...	...	...	1	...	...	...	1	...	...	...	...	...	...	2	...	...	·07	·12
E	Mazagon	...	...	1	...	...	1	1	...	...	...	...	1	...	...	4	...	...	·18	·16
	Tarwadi	3	1	3	...	2	1	1	2	...	2	3	4	...	...	22	...	...	·77	·63
	2nd Nagpada	1	...	1	2	...	1	...	1	...	2	1	...	...	...	9	...	...	·41	·04
	Kamathipura	...	...	...	...	...	...	...	...	...	1	2	1	...	...	4	...	...	·10	·08
	Tardeo	...	...	1	...	...	...	...	...	...	2	...	1	...	...	4	...	...	·14	·07
	Byculla	...	...	...	...	1	2	...	1	1	1	3	1	...	...	10	...	...	·13	·09
	1st Nagpada	...	1	...	1	...	...	...	...	...	...	...	1	...	...	3	...	...	·46	·25
F	Parel	...	1	1	1	2	...	5	2	...	1	...	1	...	...	14	...	...	·30	·06
	Sewri	...	...	...	...	3	...	1	...	...	...	...	...	...	...	4	...	...	·20	·06
	Sion	...	...	1	...	1	1	...	1	...	...	...	...	...	...	4	...	...	·13	·13
G	Mahim	1	...	1	...	1	...	...	1	...	...	...	...	...	...	4	...	...	·13	·06
	Worli	...	1	...	...	...	...	...	2	...	...	...	...	...	...	3	...	...	·03	·05
	Harbour, Docks, Railways and Homeless	...	...	1	...	...	...	...	...	...	1	...	1	...	...	3	...	...	·06	·22
	Total	26	18	38	22	26	23	24	29	17	49	47	36	248	112	360	·38	·33	·36	·28

TABLE of Deaths registered from ENTERIC FEVER by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·64	·30
	Middle and Lower Colaba	1	...	1	1	1	2	...	...	...	...	...	...	...	...	6	...	...	·30	·24
	Fort, South	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·51
	Fort, North	1	1	...	1	1	3	...	2	2	...	1	1	...	...	13	...	...	·51	·28
	Esplanade	...	...	...	...	...	1	...	1	...	1	...	...	...	...	3	...	...	·16	·66
B.	Mandvi	...	...	...	...	...	1	...	1	2	...	1	...	...	...	5	...	...	·15	·08
	Chukla	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	·04	·07
	Umarkhadi	2	...	...	...	1	...	2	...	2	...	...	...	...	...	7	...	...	·15	·13
	Dongri	...	...	...	1	...	...	...	...	2	...	...	...	...	...	5	...	...	·11	·03
C.	Market	...	...	1	...	1	...	...	...	1	2	1	...	...	...	6	...	...	·19	·08
	Dhobi Talao	1	1	...	2	1	1	...	5	2	5	2	1	...	...	19	...	...	·49	·37
	Fanaswadi	...	1	...	...	1	...	...	...	4	2	1	2	...	...	11	...	...	·40	·18
	Bhuleshwar	...	...	...	...	...	...	...	...	1	1	...	1	...	...	3	...	...	·08	·05
	Khara Talao	...	...	1	...	...	...	...	1	...	...	...	...	...	...	2	...	...	·08	·08
	Kumbharwada	...	...	1	...	...	...	1	...	1	...	...	...	...	...	3	...	...	·10	·03
D.	Khetwadi	2	...	...	1	2	2	...	...	...	...	1	...	...	...	8	...	...	·25	·21
	Girgaum	1	...	1	2	1	...	2	2	...	...	1	...	...	...	10	...	...	·32	·20
	Chowpati	1	1	...	...	...	2	...	...	1	1	2	...	...	...	8	...	...	·70	·23
	Walkeshwar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·08
	Mahalakshmi	...	...	...	...	...	...	2	...	1	1	...	1	...	...	5	...	...	·19	·12
E.	Mazagon	...	...	...	...	1	...	...	2	...	...	1	1	...	...	5	...	...	·16	·16
	Tarwadi	...	1	...	...	1	...	...	...	1	...	1	...	...	...	4	...	...	·14	·33
	2nd Nagpada	...	...	...	2	...	...	...	...	...	...	1	...	...	...	3	...	...	·13	·04
	Kamathipura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·02
	Tardeo	1	1	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	·10	·14
	Byculla	...	...	1	1	...	1	1	...	...	...	1	2	...	...	7	...	...	·09	·07
	1st Nagpada	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	·15	·50
F.	Parel	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	·04	·04
	Sewri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
	Sion	...	...	...	1	1	...	...	1	...	2	...	...	...	...	5	...	...	·16	·08
G.	Mahim	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	·03	·09
	Worli	...	1	...	...	1	...	...	1	...	1	1	...	...	...	5	...	...	·05	·05
	Harbour, Docks, Railways and Homeless	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	·04	·17
	Total	13	7	7	12	14	15	9	15	20	16	15	9	111	41	152	·17	·12	·15	·12

TABLE of Deaths registered from FEVERS (excluding MALARIAL and ENTERIC FEVERS) by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	...	...	...	...	1	...	1	1	...	1	...	...	...	...	4	...	...	2·56	·60
	Middle and Lower Colaba	6	1	1	5	3	1	1	2	4	3	6	3	...	...	36	...	...	1·82	2·16
	Fort, South	...	1	...	1	1	1	2	...	...	...	...	...	...	...	6	...	...	1·78	1·55
	Fort, North	17	12	14	15	9	7	9	10	12	7	5	11	...	...	128	...	...	5·03	4·55
	Esplanade	14	10	13	13	5	11	10	6	10	33	8	9	...	...	141	...	...	7·93	9·54
B.	Mandvi	15	17	15	19	6	10	3	6	14	18	12	13	...	...	148	...	...	4·45	3·47
	Chakla	2	10	13	4	4	6	1	1	3	8	7	3	...	...	62	...	...	2·55	2·01
	Umarkhadi	7	8	12	12	5	6	10	6	12	15	18	8	...	...	119	...	...	2·60	2·84
	Dongri	11	14	13	4	6	8	7	8	8	12	9	18	...	...	118	...	...	4·38	3·51
C.	Market	5	5	6	10	4	6	3	6	4	2	7	2	...	...	60	...	...	1·98	1·89
	Dhobi Talao	7	7	8	8	7	8	8	8	8	3	10	6	...	...	83	...	..	2·14	2·51
	Panaswadi	4	6	3	2	3	4	6	6	5	3	3	4	...	...	49	...	...	1·78	1·90
	Bhuleshwar	5	2	11	2	1	6	6	5	5	5	5	2	...	...	55	...	...	1·50	2·22
	Khara Talao	10	6	8	4	5	8	14	11	10	7	5	3	...	...	91	...	...	3·96	3·36
	Kumbharwada	9	4	4	3	8	5	8	5	5	6	4	6	...	...	67	...	...	2·41	2·01
D.	Khetwadi	3	3	3	3	1	5	5	5	3	3	2	4	...	...	40	...	...	1·25	1·89
	Girgaum	6	3	5	3	4	5	4	5	3	5	6	10	...	...	59	...	...	1·91	1·98
	Chowpati	...	1	1	2	2	4	1	2	...	1	...	...	...	...	14	...	...	1·22	·94
	Walkeshwar	2	...	5	1	1	...	...	1	...	...	1	...	...	...	9	...	...	·84	·81
	Mahalakshmi	8	7	7	8	10	6	9	7	5	2	4	1	...	...	74	...	...	2·81	2·64
E.	Mazagon	11	5	9	5	12	10	10	23	23	6	12	22	...	...	148	...	...	4·92	4·46
	Tarwadi	12	12	9	11	15	7	15	21	19	22	12	23	...	...	178	...	...	6·26	5·81
	2nd Nagpada	3	6	6	9	7	8	11	11	8	9	6	8	...	...	92	...	...	4·25	4·05
	Kamathipura	26	22	23	21	24	17	9	8	9	13	9	15	...	...	196	...	...	5·33	5·06
	Tardeo	14	14	9	6	13	5	5	7	8	7	8	11	...	...	107	...	...	3·85	3·45
	Byculla	12	18	22	24	24	15	14	9	9	35	39	17	...	...	238	...	...	3·15	3·50
	1st Nagpada	2	1	1	...	1	3	...	2	2	2	...	1	...	...	15	...	...	2·33	3·03
F.	Parel	22	13	19	8	16	11	9	34	36	22	22	28	...	...	240	...	...	5·27	2·63
	Sewri	3	9	8	11	7	6	7	8	8	9	9	22	...	...	107	...	...	5·61	3·01
	Sion	11	3	5	9	6	5	9	11	7	9	6	4	...	...	85	...	...	2·77	2·88
G.	Mahim	2	7	3	2	3	7	6	4	6	5	5	6	...	...	56	...	...	1·83	1·22
	Worli	25	24	14	16	15	18	17	27	21	11	18	20	...	...	226	...	...	2·52	2·39
	Harbour, Docks, Railways and Homeless	3	1	2	3	1	1	3	3	5	...	...	...	...	...	22	...	...	·48	·60
	Total ...	277	252	270	243	230	215	223	269	272	284	258	280	1,882	1,191	3,073	2·93	3·51	3·13	2·87

TABLE of Deaths registered from DIARRHŒA and DYSENTERY by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	...	2	1	1	1	...	1	6	2	2	...	...	...	...	16	...	...	10·27	2·70
	Middle and Lower Colaba	10	3	6	9	6	4	6	6	4	4	2	5	...	...	65	...	...	3·50	2·90
	Fort, South	...	...	1	...	...	...	...	...	1	...	...	...	...	...	2	...	...	·57	1·29
	Fort, North	7	4	8	7	11	8	6	17	10	4	6	7	...	...	95	...	...	3·74	2·88
	Esplanade	13	5	6	2	7	5	5	9	9	8	6	7	...	...	82	...	...	4·61	5·25
B.	Mandvi	6	7	11	8	11	11	10	11	8	8	8	10	...	...	109	...	...	3·28	1·50
	Chinkla	2	6	6	8	4	5	5	9	8	7	7	4	...	...	71	...	...	2·93	1·65
	Umarkhadi	15	17	21	12	25	16	11	23	12	13	10	17	...	...	192	...	...	4·20	3·51
	Dongri	22	9	25	13	11	10	16	11	13	13	6	13	...	...	179	...	...	6·56	4·14
C.	Market	8	6	12	7	8	3	10	11	6	4	8	5	...	...	88	...	...	2·91	1·60
	Dhobi Talao	17	12	7	10	9	3	15	16	13	10	7	10	...	...	129	...	...	3·83	2·51
	Fanaswadi	12	3	6	8	4	7	8	7	3	4	3	7	...	...	72	...	...	2·62	1·85
	Bhuleshwar	6	11	14	15	12	14	16	19	10	13	12	22	...	...	167	...	...	4·58	2·58
	Khara Talao	13	13	9	9	9	4	6	12	8	9	6	8	...	...	106	...	...	4·61	4·13
	Kumbharwada	6	12	9	13	7	6	9	12	8	11	7	5	...	...	105	...	...	3·79	2·80
D.	Khetwadi	8	5	5	4	10	8	7	8	16	3	9	12	...	...	95	...	...	2·97	2·64
	Girgaum	6	6	6	9	4	6	5	11	7	4	4	5	...	...	73	...	...	2·37	2·04
	Chowpati	3	1	2	...	2	6	2	6	1	3	1	3	...	...	30	...	...	2·68	1·49
	Walkeshwar	5	2	...	1	3	...	2	2	2	1	2	...	...	...	20	...	...	1·37	1·22
	Mahalakshmi	17	14	16	13	13	15	10	15	15	2	6	2	...	...	138	...	...	5·24	3·00
E.	Mazagon	9	7	14	12	30	8	21	34	24	13	19	9	...	...	200	...	...	6·65	3·25
	Tarwadi	29	24	12	23	24	14	27	33	38	39	36	31	...	...	330	...	...	11·60	6·73
	2nd Nagpada	13	14	15	17	5	19	12	7	15	16	6	7	...	...	146	...	...	6·72	4·96
	Kamathipura	20	14	16	31	15	14	18	21	13	17	19	8	...	...	206	...	...	5·60	3·91
	Tardeo	15	16	15	16	18	14	17	13	8	14	9	19	...	...	174	...	...	6·26	4·19
	Byculla	54	45	56	50	40	41	52	78	67	36	35	35	...	...	589	...	...	7·81	4·40
	1st Nagpada	1	2	3	2	3	3	5	1	3	1	1	1	...	...	26	...	...	4·05	3·54
F.	Parel	20	13	14	18	10	9	11	24	26	17	22	15	...	...	199	...	...	4·37	3·27
	Sewri	8	10	9	8	13	5	1	12	12	6	9	9	...	...	102	...	...	5·34	4·33
	Sion	12	14	9	12	12	10	12	19	32	20	12	12	...	...	176	...	...	5·73	3·89
G.	Mahim	11	12	12	12	14	12	19	24	20	11	8	11	...	...	166	...	...	5·44	4·31
	Worli	24	25	27	33	14	26	48	61	46	33	25	28	...	...	390	...	...	4·35	3·56
	Harbour, Docks, Railways and Homeless	...	1	1	...	...	...	...	1	...	...	...	3	...	...	6	...	...	·13	·37
	Total ...	399	345	374	386	335	306	393	539	460	346	311	330	2,388	2,156	4,544	3·72	6·35	4·63	3·20

TABLE of Deaths registered from TUBERCLE OF LUNGS and TUBERCULAR DISEASES by Section and Month in 1912.

1	2	3												4			5			6
														Total.			Death Ratio per 1,000 of population.			
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	...	...	...	...	...	1	1	...	1	...	...	1	...	...	4	...	...	2·56	1·20
	Middle and Lower Colaba	1	1	...	2	1	...	...	...	...	1	1	1	...	...	8	...	...	·40	·43
	Fort, South	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	·38	·25
	Fort, North	4	1	...	2	3	1	2	5	2	5	4	1	...	...	30	...	...	1·18	·88
	Esplanade	...	4	2	3	3	2	4	3	2	1	3	4	...	...	31	...	...	1·74	1·86
B.	Mandvi	...	1	2	1	...	1	1	4	2	2	1	2	...	...	17	...	...	·51	·34
	Chukla	2	1	1	1	1	2	...	2	2	2	2	2	...	...	17	...	...	·70	·45
	Umarkhadi	9	6	12	10	3	2	5	6	6	4	3	2	...	...	67	...	...	1·46	2·40
	Dongri	3	...	1	...	3	...	6	3	2	4	3	1	...	...	26	...	...	·95	1·20
C.	Market	2	...	3	1	...	...	4	4	5	1	1	1	...	...	22	...	...	·72	·43
	Dhobi Talao	1	1	6	6	3	...	4	2	4	2	2	2	...	...	30	...	...	·77	·70
	Fanaswadi	1	3	2	3	3	...	...	2	4	1	...	...	...	...	19	...	...	·69	·24
	Bhuleshwar	1	1	2	2	6	1	2	2	1	1	1	1	...	...	21	...	...	·57	·61
	Khara Talao	...	3	...	...	2	...	...	2	3	3	2	1	...	...	16	...	...	·69	·38
	Kumbharwada	...	...	1	1	1	...	...	...	...	...	2	3	...	...	8	...	...	·28	·25
D.	Khetwadi	...	...	2	4	3	2	...	5	1	1	2	3	...	...	23	...	...	·72	·06
	Girgaum	3	1	3	...	3	3	2	4	4	...	2	2	...	...	27	...	...	·87	·65
	Chowpati	...	...	...	...	...	1	...	...	1	1	1	...	...	...	4	...	...	·35	·39
	Walkeshwar	...	...	...	...	...	...	...	...	1	1	1	1	...	...	4	...	...	·37	·24
	Mahalakshmi	...	1	1	...	...	1	...	1	...	1	...	1	...	...	6	...	...	·22	·16
E.	Mazagon	1	9	4	5	1	...	1	...	...	2	1	3	...	...	27	...	...	·89	·68
	Tarwadi	4	11	11	6	7	2	6	6	3	8	2	9	...	...	75	...	...	2·63	2·09
	2nd Nagpada	...	1	2	2	1	2	1	...	4	...	...	2	...	...	15	...	...	·69	·45
	Kamathipura	...	4	1	3	...	1	...	1	3	5	...	1	...	...	19	...	...	·51	·49
	Tardeo	1	1	...	3	...	1	...	1	...	1	...	4	...	...	12	...	...	·43	·39
	Byculla	1	2	4	3	3	1	2	2	1	1	3	7	...	...	30	...	...	·89	·85
	1st Nagpada	1	1	...	...	...	...	...	1	1	...	...	1	...	...	5	...	...	·77	1·26
F.	Parel	...	1	...	...	2	3	3	1	4	...	1	1	...	...	16	...	...	·35	·15
	Sewri	...	...	...	1	...	...	...	1	...	...	...	...	...	...	2	...	...	·10	·18
	Sion	...	...	...	1	...	...	...	2	...	...	2	2	...	...	7	...	...	·22	·16
G.	Mahim	...	...	3	...	3	...	2	2	...	2	2	...	...	...	14	...	...	·45	·16
	Worli	1	2	3	...	1	...	...	...	1	2	1	1	...	...	12	...	...	·13	·10
	Harbour, Docks, Railways and Homeless	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	·11
	Total ...	36	55	63	60	52	27	46	63	58	52	43	60	329	286	615	·51	·34	·62	·57

TABLE of Deaths registered from RESPIRATORY DISEASES (including Phthisis) by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba ...	2	1	2	6	2	2	3	1	2	4	2	...	...	...	27	...	...	17·34	4·80
	Middle and Lower Colaba	13	16	15	21	28	17	13	16	9	11	7	10	...	...	171	...	...	8·68	9·45
	Fort, South	...	1	...	...	2	1	1	1	...	...	...	1	...	...	7	...	...	2·02	3·11
	Fort, North	26	29	26	28	25	27	24	17	21	14	19	14	...	...	270	...	...	10·62	10·81
	Esplanade	10	8	13	10	6	13	8	15	13	15	11	13	...	...	135	...	...	7·60	13·34
B.	Mandvi	58	44	60	62	30	55	27	36	41	45	55	40	...	...	553	...	...	16·65	12·99
	Chakla	20	27	29	43	40	49	44	30	30	23	44	31	...	...	410	...	...	16·92	14·92
	Umarkhadi	95	81	89	99	71	83	73	77	68	70	54	70	...	...	930	...	...	20·35	14·99
	Dongri	55	53	55	36	36	31	51	49	33	35	31	30	...	...	495	...	...	18·16	13·26
C.	Market	22	16	24	30	30	20	27	18	20	18	23	26	...	...	274	...	...	9·08	7·61
	Dhobi Talao	38	35	33	32	27	35	24	33	22	30	37	29	...	...	375	...	...	9·69	10·51
	Fanaswadi	28	19	20	19	19	23	24	18	9	15	15	22	...	...	231	...	...	8·42	8·76
	Bhuleshwar	36	37	43	45	40	42	36	26	41	25	35	49	...	...	455	...	...	12·47	13·94
	Khara Talao	36	27	34	23	29	29	29	22	27	29	28	32	...	...	345	...	...	15·01	15·22
	Kumbharwada	32	30	39	33	30	41	26	28	25	37	30	30	...	...	381	...	...	13·75	12·15
D.	Khetwadi	25	25	29	30	37	38	30	21	32	27	22	28	...	...	339	...	...	10·61	9·29
	Girgaum	31	27	29	38	28	37	26	23	21	26	27	20	...	...	328	...	...	10·65	10·58
	Chowpati	16	12	7	11	8	4	9	10	9	8	12	5	...	...	111	...	...	9·73	6·68
	Walkeshwar	7	6	6	8	5	2	6	8	4	6	2	3	...	...	63	...	...	5·92	5·21
	Mahalakshmi	28	25	31	22	21	8	28	18	20	20	20	11	...	...	252	...	...	9·58	7·28
E.	Mazagon	28	28	46	36	29	39	23	18	24	30	16	26	...	...	333	...	...	11·07	10·90
	Tarwadi	32	39	35	44	44	30	33	32	34	34	38	45	...	...	440	...	...	15·47	12·91
	2nd Nagpada	32	29	32	37	33	36	36	38	32	37	24	33	...	...	399	...	...	18·98	16·76
	Kamathipura	61	45	65	57	61	68	63	56	54	51	60	56	...	...	697	...	...	18·96	15·05
	Tardeo	29	22	36	41	38	35	27	31	27	21	37	31	...	...	375	...	...	13·50	12·16
	Byculla	106	93	90	106	98	76	103	109	87	73	91	75	...	...	1,107	...	...	14·69	12·81
	1st Nagpada	8	6	8	8	10	10	8	12	5	5	6	7	...	...	88	...	...	13·71	12·65
F.	Parel	33	28	32	50	37	46	37	46	38	31	26	33	...	...	437	...	...	9·60	10·11
	Sewri	13	12	15	21	28	14	15	20	10	11	13	21	...	...	193	...	...	10·12	8·97
	Sion	19	15	19	30	29	22	27	22	23	20	25	16	...	...	267	...	...	8·70	9·13
G.	Mahim	24	25	35	23	29	38	33	37	29	19	45	36	...	...	373	...	...	12·23	10·88
	Worli	87	69	89	78	105	84	103	111	77	67	55	58	...	...	983	...	...	10·96	11·46
	Harbour, Docks, Railways and Homeless	1	1	1	2	1	1	4	4	1	2	...	3	...	...	21	...	...	46	·63
	Total	1,046	931	1,087	1,129	1,046	1,046	1,021	1,003	888	859	910	899	6,367	5,498	11,865	9·94	16·21	12·11	11·21

TABLE of Deaths registered from INJURIES by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	...	1	...	...	...	...	1	...	...	1	...	1	...	...	4	...	...	2·56	·60
	Middle and Lower Colaba	1	3	4	1	3	1	1	...	1	1	1	1	...	...	18	...	...	·91	·98
	Fort, South	1	1	...	...	...	...	...	...	1	1	...	...	...	...	4	...	...	1·15	·77
	Fort, North	2	2	3	...	...	6	...	...	1	...	1	...	...	...	15	...	...	·59	·99
	Esplanade	5	6	5	5	5	3	5	3	4	6	7	3	...	...	56	...	...	3·15	4·44
B.	Mandvi	...	...	1	1	3	2	1	1	1	1	1	...	...	...	12	...	...	·36	·61
	Chukla	1	3	2	1	...	2	1	1	1	1	1	1	...	...	15	...	...	·61	·70
	Umarkhadi	2	4	2	3	4	4	2	1	1	...	2	8	...	...	33	...	...	·72	·69
	Dongri	2	1	1	...	5	...	2	4	...	1	1	...	...	...	17	...	...	·62	·56
C.	Market	1	2	1	2	3	3	...	1	...	...	1	1	...	...	15	...	...	·49	·64
	Dhobi Talao	2	3	3	3	3	2	4	3	2	...	5	4	...	...	34	...	...	·87	·78
	Pannaswadi	1	...	2	2	...	1	...	...	2	...	1	1	...	...	10	...	...	·36	·51
	Bhuleshwar	2	...	1	5	4	1	1	2	...	...	...	2	...	...	18	...	...	·49	·63
	Khara Talao	4	3	1	3	...	...	2	...	1	...	...	1	...	...	15	...	...	·65	1·08
	Kumbharwada	1	2	1	3	...	1	...	1	...	2	...	1	...	...	12	...	...	·43	·53
D.	Khetwadi	3	1	3	1	...	2	2	1	3	2	...	1	...	...	19	...	...	·59	·60
	Girgaum	...	...	4	...	1	3	2	1	...	1	3	2	...	...	17	...	...	·55	·48
	Chowpati	...	1	...	...	...	...	...	3	...	...	...	1	...	...	5	...	...	·43	·55
	Walkeshwar	1	...	...	1	...	...	...	...	1	...	1	...	...	...	4	...	...	·37	·40
	Mahalakshmi	...	2	...	...	...	2	1	2	...	...	1	1	...	...	9	...	...	·34	·44
E.	Mazagon	3	3	...	4	2	...	2	...	1	1	...	3	...	...	19	...	...	·68	·68
	Jarwadi	14	9	4	7	9	6	6	10	8	5	8	8	...	...	94	...	...	3·30	2·92
	2nd Nagpada	2	...	2	...	1	...	2	2	1	1	2	2	...	...	15	...	...	·69	·63
	Kamathipura	...	3	...	...	2	...	4	...	...	3	...	3	...	...	15	...	...	·40	·79
	Tardeo	1	2	...	1	...	...	1	2	1	1	...	1	...	...	10	...	...	·36	·42
	Byculla	6	5	1	4	1	2	6	1	6	1	9	10	...	...	52	...	...	·69	·55
	1st Nagpada	...	...	...	...	1	1	...	1	...	...	...	1	...	...	4	...	...	·62	1·26
F.	Parel	...	1	2	1	1	4	3	3	3	2	1	4	...	...	35	...	...	·76	·64
	Sewri	3	...	2	1	1	2	...	...	...	3	...	...	...	...	12	...	...	·62	·54
	Sion	1	1	3	1	2	...	3	2	1	1	1	...	...	...	16	...	...	·52	·62
G.	Mahim	1	...	2	1	2	...	1	3	2	6	...	3	...	...	31	...	...	·68	·61
	Worli	6	2	7	4	3	2	2	5	2	4	1	4	...	...	42	...	...	·46	·43
	Harbour, Docks, Railways and Homeless	1	1	2	1	1	2	...	1	2	...	1	1	...	...	13	...	...	·28	1·00
	Total	67	62	59	56	57	52	60	58	46	45	49	69	487	193	680	·76	·56	·69	·76

TABLE of Deaths registered from OTHER CAUSES by Section and Month in 1912.

1	2	3												4			5			6
Ward.	SECTION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total. Males.	Total. Females.	Total. Total.	Death Ratio per 1,000 of population. Males.	Females.	Total.	Mean Ratio per 1,000 of population during the previous 5 years.
A.	Upper Colaba	3	3	2	4	4	6	7	3	4	4	2	3	...	...	45	...	...	28·90	12·60
	Middle and Lower Colaba	13	16	12	9	18	19	12	4	9	22	13	10	...	...	157	...	...	7·97	8·21
	Fort, South	3	2	1	1	4	2	...	2	3	2	1	1	...	...	22	...	...	6·85	4·93
	Fort, North	29	30	23	22	33	33	29	29	29	32	30	22	...	...	341	...	...	13·42	12·98
	Esplanade	17	14	6	12	10	11	17	13	9	14	13	11	...	...	147	...	...	8·27	13·26
B.	Mandvi	61	39	47	39	24	42	39	30	40	32	29	38	...	...	460	...	...	13·85	12·86
	Chukla	35	25	40	43	39	58	31	43	30	34	24	30	...	...	432	...	...	17·82	15·49
	Umarkhadi	71	61	65	72	67	76	78	76	67	69	62	52	...	...	816	...	...	17·86	12·66
	Dongri	36	18	27	28	33	32	32	35	32	33	34	17	...	...	357	...	...	13·10	11·26
C.	Market	27	24	16	26	24	19	24	31	20	29	22	26	...	...	288	...	...	9·54	9·83
	Dhobi Talao	57	52	33	43	45	47	40	50	42	39	44	39	...	...	531	...	...	13·72	11·88
	Fanaswadi	28	16	23	27	24	23	22	23	23	22	39	19	...	...	289	...	...	10·54	8·76
	Bhuleshwar	48	44	58	55	44	60	63	47	50	41	55	30	...	...	590	...	...	16·18	12·06
	Khara Talao	45	27	36	37	36	46	46	46	41	40	34	36	...	...	470	...	...	20·45	16·98
	Kumbharwada	35	31	35	28	43	41	24	42	40	38	36	36	...	...	429	...	...	15·48	10·76
D.	Khetwadi	33	28	31	32	33	44	28	36	26	27	33	25	...	...	376	...	...	11·77	10·49
	Girgaum	47	34	28	40	33	38	21	32	44	35	32	32	...	...	416	...	...	13·51	12·55
	Chowpati	17	9	8	10	11	13	19	13	8	8	8	8	...	...	132	...	...	11·58	9·12
	Walkeshwar	9	6	12	19	6	3	14	5	7	7	6	7	...	...	101	...	...	9·49	7·08
	Mahalakshmi	18	21	29	29	22	12	39	39	24	24	22	15	...	...	294	...	...	11·17	8·76
E.	Mazagon	36	30	37	36	22	25	35	25	34	36	34	27	...	...	377	...	...	12·53	13·77
	Tarwadi	52	49	60	56	47	41	47	59	40	57	38	52	...	...	598	...	...	21·03	17·44
	2nd Nagpada	33	36	32	32	43	34	38	30	34	48	34	47	...	...	450	...	...	20·73	19·17
	Kamathipura	66	56	58	65	66	59	61	60	62	49	50	53	...	...	705	...	...	19·18	17·43
	Tardeo	26	29	39	40	26	47	38	48	29	21	34	33	...	...	410	...	...	14·77	12·66
	Byculla	112	100	101	103	111	105	119	118	106	72	79	100	...	...	1,226	...	...	16·27	13·87
	1st Nagpada	9	5	7	8	11	8	5	9	7	4	10	9	...	...	92	...	...	14·34	13·41
F.	Parel	46	54	43	46	48	41	63	48	46	46	31	31	...	...	543	...	...	11·94	9.62
	Sewri	19	24	23	16	30	29	25	16	19	14	10	16	...	...	240	...	...	12·58	9·75
	Sion	33	32	33	35	22	35	42	42	40	35	32	27	...	...	408	...	...	13·29	12·93
G.	Mahim	32	32	19	21	35	20	29	29	22	25	26	19	...	...	309	...	...	10·13	10·14
	Worli	75	78	77	79	66	67	76	80	96	67	60	74	...	...	895	...	...	9·98	9·95
	Harbour, Docks, Railways and Homeless	7	1	5	...	...	1	...	3	...	...	...	6	...	...	23	...	...	·51	·91
	Total ...	1,178	1,026	1,060	1,113	1,080	1,137	1,163	1,175	1,083	1,026	977	951	6,474	6,495	12,969	10·11	19·15	13·24	11·81

COMPARATIVE TABLE of Deaths from some of the PRINCIPAL CAUSES during 1912 and the preceding 5 years.

YEAR.	Cholera.		Small-pox.		Measles.		Plague.		Malaria.		Enteric Fever.		Other Fevers.		Diarrhœa and Dysentery.		Tubercle including Tubercle of Lungs.		Respiratory System.				Injuries.		All other Causes.		Total Deaths.	
																			Phthisis.		Other Diseases of the Respiratory System.							
	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.	No. of deaths.	Rate per 1,000.
1907 ...	439	·44	86	·08	107	·10	6,389	6·53	149	·15	116	·11	3,368	3·44	3,489	3·56	563	·57	2,877	2·94	9,022	9·22	813	·83	11,269	11·52	38,687	39·56
1908 ...	95	·09	1,026	1·04	653	·66	5,361	5·48	331	·33	111	·11	2,961	3·02	3,184	3·25	636	·65	2,387	2·44	8,954	9·15	808	·82	11,764	12·03	38,271	39·13
1909 ...	727	·74	473	·48	75	·07	5,197	5·31	293	·29	92	·09	2,415	2·45	2,585	2·64	447	·45	2,415	2·46	7,974	8·15	698	·71	11,487	11·74	34,878	35·46
1910 ...	107	·10	1,008	1·05	184	·18	3,656	3·73	293	·29	156	·15	2,664	2·72	3,352	3·42	557	·56	2,282	2·33	8,212	8·39	701	·71	11,761	12·02	34,933	35·72
1911 ...	128	·12	443	·45	652	·66	4,006	4·09	334	·34	145	·14	2,667	2·72	3,075	3·13	616	·62	2,078	2·12	8,640	8·82	702	·71	11,480	11·72	34,961	35·69
Mean of the preceding 5 years.	298	·30	607	·62	334	·34	4,922	5·03	280	·28	124	·12	2,815	2·87	3,137	3·20	564	·57	2,408	2·46	8,561	8·75	744	·76	11,552	11·81	36,346	37·15
1912 ..	1,790	1·82	979	·99	210	·21	1,717	1·75	360	·36	152	·15	3,073	3·13	4,544	4·63	615	·62	2,179	2·22	9,686	9·88	680	·69	12,969	13·24	38,954	39·77

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SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London.

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	GENERAL DISEASES.													
1	Small-pox	54	114	230	253	171	84	45	15	4	4	1	5	979
3	Chicken-pox	...	1	...	...	...	...	...	...	...	...	...	...	1
4	Measles	33	38	44	39	22	7	5	5	3	4	7	3	210
6	Scarlet Fever	...	...	...	...	...	...	...	1	...	...	...	...	1
8	Plague	33	101	306	611	348	92	61	59	41	19	21	25	1,717
9	Relapsing Fever	...	...	...	1	...	...	...	...	1	...	...	...	2
12	Whooping Cough	4	1	...	4	3	...	4	1	2	1	1	1	22
13	Mumps	...	1	...	1	...	1	...	...	...	...	...	...	3
	,, and abscess	...	1	...	...	...	...	...	...	...	...	...	...	1
14	Diphtheria	...	...	2	...	...	1	1	...	...	...	...	1	5
15	Cerebro-Spinal Fever	1	...	...	...	...	...	...	...	1	1	...	1	4
16	Simple Continued Fever	7	4	...	...	...	...	...	...	...	...	...	...	11
17	Enteric Fever	13	7	7	12	14	15	9	15	20	16	15	9	152
17a	Malta Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
18	Cholera	98	7	3	24	128	961	283	150	29	31	12	79	1,790
19	Choleraic Diarrhœa	1	...	...	...	...	...	...	...	...	...	...	...	1
20	Diarrhœa	269	225	247	258	256	201	263	343	380	235	211	208	2,986
21	Dysentery	129	130	127	128	99	105	130	196	180	121	100	122	1,567
23	Beri-Beri	1	1	...	...	...	...	...	...	...	...	...	1	3
24	Malarial Fever	26	18	38	22	26	28	24	29	17	49	47	36	360
	Ague and Remittent	270	248	270	242	230	215	223	268	271	284	258	280	3,059
25	Phagedæna	...	...	...	...	...	...	...	...	...	...	...	...	...
26	Erysipelas	2	3	...	1	...	1	3	2	3	2	2	2	21
27	Pyæmia	2	1	1	1	1	3	1	...	...	1	...	1	12
	Septic gland	...	...	...	...	1	...	...	...	...	...	...	1	1
28	Septicæmia	5	5	10	9	11	7	2	2	5	11	11	4	82
	Puerperal	24	39	39	51	40	39	35	25	28	35	38	30	417
	Septic Disease	...	1	...	...	...	...	...	...	...	...	...	...	1
	Blood Poisoning	...	...	...	...	...	1	...	1	...	...	1	...	3
	Septic Fever	3	...	...	1	...	...	...	4	1	1	2	1	13
29	Tetanus	12	4	6	8	5	4	3	4	4	6	11	5	72
30	Tubercle of Lungs	6	12	15	14	21	10	17	27	25	14	13	23	197
	Scrofula	6	3	4	6	5	8	4	2	4	6	10	5	63
	Tuberculosis	18	22	30	38	19	18	20	22	19	29	16	21	267
	Other Tubercular Affections	12	21	18	8	12	4	9	14	14	9	14	16	151
	Tabes Mesenterica	1	...	1	...	...	...	...	1	...	...	...	...	3
31	Leprosy	8	4	7	12	5	5	7	9	10	9	12	8	96
	Cancer	4	4	1	9	4	4	8	9	2	6	11	5	67
	Syphilitic mole on the larynx	...	1	...	...	...	...	...	...	...	...	...	...	1
33	Syphilis	10	7	4	7	2	...	5	5	6	6	2	9	63
	a Primary	...	...	...	...	...	...	1	...	...	...	...	...	1
	b. Secondary	2	...	3	...	1	1	2	2	2	1	2	4	20
	c. Inherited	...	...	...	1	...	1	...	1	...	2	...	1	6
	Syphilitic Myocarditis	1	...	...	...	...	...	...	...	...	...	...	...	1
	,, Stricture of Rectum	...	...	...	...	...	...	1	...	...	...	...	...	1
	Syphilitic Cachexia	...	...	...	...	...	...	...	...	...	1	...	1	2
34	Gonorrhœa	...	...	...	...	...	...	...	...	...	...	...	1	1
35	Hydrophobia	...	1	...	...	...	1	...	...	1	...	1	1	5
40	Worms	2	...	2	2	3	1	3	7	5	2	2	3	32
54	Scurvy	...	...	1	...	...	1	2	...	...	...	...	...	4
	Intoxication Septic	...	1	...	...	...	...	...	...	...	...	...	...	1
58	Rheumatic Fever	7	7	5	8	5	9	1	1	1	1	3	...	48
	Rheumatism of Heart	...	...	...	...	...	...	...	...	...	...	1	...	1
59	Rheumatism	...	1	1	...	1	...	4	4	5	4	4	5	29
	,, Syphilitic	1	1	1	...	...	...	...	1	1	1	...	...	6
60	Gout	...	...	...	...	1	...	...	...	1	...	...	...	2
61	Arthritis Gonnorrhœal	1	...	...	...	...	...	...	...	...	...	...	...	1
62	Cyst	...	1	...	...	1	...	1	...	...	...	...	...	3
63	New Growth Non-Malignant	...	...	...	1	1	1	...	1	...	...	...	1	5
	Fibroma	...	1	...	...	...	...	...	...	...	...	...	...	1
64	New Growth, Malignant	...	1	...	...	1	...	...	1	1	...	...	...	4
	Sarcoma	1	1	1	...	...	1	...	...	...	1	2	...	7
65	Rickets	78	80	98	89	128	133	149	139	112	75	74	83	1,233
66	Anæmia	64	53	72	68	46	60	58	61	41	48	33	62	666
69	Chlorosis	1	...	1	1	...	1	1	...	...	...	1	1	7
70	Pernicious Anæmia	12	16	9	13	16	12	5	8	12	10	13	13	139
75	Diabetes Mellitus	5	4	5	1	4	5	8	3	4	4	2	2	47
	Diabetic Coma	...	...	...	...	...	...	...	1	...	...	...	...	1
77	Immaturity at Birth	22	9	4	15	14	13	24	27	30	22	19	10	209
79	Debility	271	219	213	207	188	223	240	256	261	243	219	163	2,703
80	Old Age	221	187	163	165	163	132	145	158	179	167	138	186	2,104

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	Perispheral Neuritis	...	...	...	...	...	...	...	...	...	1	...	...	1
83	Meningitis	...	...	...	...	...	...	...	...	...	...	...	1	1
85	Myelitis	...	...	...	...	...	...	...	...	...	...	...	1	1
	B. Infantile Paralysis	...	1	...	2	...	2	...	...	...	...	...	...	5
	Disseminated Sclerosis	...	...	...	...	...	...	1	...	...	...	...	...	1
	Acute Anterior Polio Myelitis	...	...	...	...	...	...	...	...	...	1	...	...	1
	Locomotor Ataxy	...	...	...	...	...	...	...	...	...	...	...	1	1
	Spina Bifida	...	...	...	...	...	...	...	...	...	...	1	...	1
	Spastic Paraplegia	...	...	...	1	...	1	...	...	...	...	...	1	3
89	Inflammation, Meningitis	...	4	8	7	4	1	9	11	4	5	4	4	6	67
	Suppurative	...	...	...	...	...	...	...	...	1	...	...	...	...	1
	Meningitis Basal	...	...	...	...	...	1	...	...	...	...	...	...	...	1
90	Hæmorrhage	...	...	...	...	...	...	...	...	...	1	...	...	1
93	Abscess	...	1	...	...	...	...	...	...	...	1	...	...	2
95	Softening	...	1	2	...	...	1	...	...	...	...	...	...	4
	Hæmorrhage recurring cerebral	...	...	...	1	...	...	...	...	...	...	...	...	1
96	Hæmorrhage	...	5	5	10	12	7	3	4	8	2	4	4	4	68
	in the ventricle region and Hemiplegia	...	...	...	1	...	...	...	...	...	...	...	...	...	1
97	Congestion	...	1	...	...	2	...	...	2	...	...	...	...	...	5
	Brain Fever	...	...	...	...	2	...	...	...	...	...	...	...	...	2
	Thrombosis Cerebral	...	...	...	...	1	1	...	...	...	...	...	2	...	4
101	Hydrocephalus	...	...	...	...	...	...	...	...	...	...	1	...	1	2
	Cerebritis	...	...	...	...	...	...	...	...	...	...	1	...	...	1
102	Apoplexy	...	1	1	4	2	2	4	2	3	3	...	3	2	27
103	Paralysis	...	8	7	6	9	8	10	9	4	4	10	5	4	84
	a—Paraplegia	...	...	1	2	2	...	1	2	3	...	2	1	1	15
	b—Hemiplegia	...	10	10	9	16	14	12	15	18	9	8	10	10	141
117	Eclampsia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Infantile	...	147	122	143	174	174	62	186	169	134	119	102	109	1,741
	Puerperal	...	2	2	1	1	1	2	...	...	2	2	...	3	16
118	Epilepsy	...	4	1	2	...	...	2	...	1	2	4	1	2	19
	Fits	...	...	...	...	...	...	1	...	...	2	...	...	...	3
122	Headache	...	...	...	...	...	...	...	...	...	...	...	1	...	1
127	Hysteria	...	1	...	...	...	...	...	...	...	...	...	...	...	1
	Hysterical Insanity	...	...	...	...	...	...	...	...	...	1	...	...	...	1
135	Nervous Weakness	...	1	1	...	...	...	...	...	...	...	...	...	...	2
137	Mania	...	...	1	1	...	...	...	...	...	1	...	...	...	3
	Puerperal	...	...	...	...	1	...	...	...	...	...	...	...	...	1
139	Dementia	...	1	...	...	1	1	...	...	...	1	...	...	...	4
	Hyperchondrism	...	...	...	1	...	...	...	...	...	...	...	...	...	1
141	Paralysis of Insane	...	...	...	...	...	...	...	1	...	...	...	...	...	1
143	Ophthalmia	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	Mastoid Abscess	...	...	1	...	...	...	...	...	...	2	...	...	...	3
	Otitis Media	...	...	...	...	...	...	1	...	...	1	...	...	...	2
	Otorrhœa	...	...	...	...	...	...	...	...	...	...	...	...	1	1
235	Inflammation of the middle Ear	...	...	...	...	...	...	...	...	1	...	...	...	...	1
	Ear Suppuration	...	...	...	...	...	...	...	...	...	...	...	1	...	1
244	Abscess of Nose	...	...	...	...	...	1	...	...	...	...	...	...	...	1
252	Pericarditis	...	...	...	...	...	...	1	1	...	...	1	...	...	3
258	Endocarditis	...	...	...	1	...	1	...	1	...	1	1	...	...	5
259	Valv disease of Heart	...	20	16	26	18	23	23	17	18	21	17	20	21	240
	1 Aortic	...	...	...	1	...	...	...	...	...	...	1	...	1	3
	2 Mitral	...	...	...	2	1	1	1	1	...	...	...	...	1	7
	Mitral and aortic regurgitation	...	...	...	...	...	2	...	...	...	...	...	...	...	2
	Atheroma	...	...	...	1	...	...	...	...	...	...	...	...	...	1
	Aneurism of the Arch of Aorta	1	...	1	1	...	2	...	...	...	...	...	...	...	5
	Aneurism of Cardiac Axis	...	...	...	...	...	...	...	...	...	...	1	...	...	1
	Sudden stoppage of Heart	...	...	...	...	...	...	...	1	...	...	...	...	...	1
	Mitral Stenosis and regurgitation	...	...	1	...	...	...	...	...	...	...	...	...	1	2
261	Degeneration	...	...	...	...	1	...	...	...	...	...	...	...	...	1
	Cardiac Dyspnœa	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Cardiac Asthma	...	...	...	...	...	...	1	...	...	...	1	...	...	2
264	Dilatation	...	...	1	1	1	...	...	...	2	1	1	...	1	8
265	Fatty Heart	...	...	1	1	...	1	...	...	...	...	...	...	...	3
269	Pulmonary Embolism	...	...	...	...	...	...	...	...	2	1	...	1	...	4

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
271	Angina Pectoris	2	2	1	1	3	...	4	...	...	...	...	2	15
	Atheroma of Arteries	...	...	...	...	...	...	1	...	...	...	1	...	2
272	Syncope	2	2	...	...	...	1	1	1	3	3	1	...	14
	Septic Phlebitis	...	...	...	...	...	...	...	1	...	...	...	...	1
	Heart failure	3	2	3	4	7	2	4	5	5	5	8	7	55
	Cardiac Dropsy	1	...	...	...	...	...	...	...	1	...	...	...	2
	Mitral Incompetency	1	...	...	...	...	...	...	...	...	...	...	...	1
	Cardiac Weakness	1	...	1	...	1	...	1	...	...	1	...	...	5
276	Degeneration of Arteries	...	...	1	...	...	...	...	...	...	...	...	...	1
284	Rupture of Aneurism of Aorta	...	...	...	...	...	...	...	...	...	1	...	...	1
290	Pulmonary thrombosis	1	...	1	...	...	...	...	...	...	...	...	...	2
302	Laryngitis	...	...	1	...	...	...	1	...	...	1	1	1	5
	„ Stricture	...	...	...	...	...	...	...	...	...	...	1	...	1
314	Bronchitis	131	95	141	143	145	131	134	127	121	119	115	110	1,512
	a—Catarrhal	2	...	...	...	...	2	...	...	...	1	...	...	5
	Capillary	71	74	67	110	104	117	119	119	88	59	60	48	1,038
315	Bronchitis (Acute or Chronic)	148	152	160	139	102	103	114	98	114	108	129	113	1,461
	Bronchitis Fœtid	...	...	...	...	...	...	...	...	...	2	...	...	2
	Cough and Cold	...	...	1	...	...	...	...	...	...	...	2	...	3
322	Spasmodic Asthma	126	120	131	147	108	123	117	98	104	129	148	146	1,497
	Chest Complaint	...	...	...	...	1	...	...	...	...	...	...	...	1
	Bronchial Asthma	1	1	...	...	...	...	...	...	...	...	...	...	2
	DISEASES OF THE LUNGS.													
323	Congestion	...	...	...	...	...	...	...	...	...	...	...	1	1
	Hæmoptysis	...	...	...	...	...	...	...	...	...	...	1	...	1
	Atelectasis	1	...	...	...	...	...	...	...	...	...	2	...	3
	Collapse of lung	1	...	1	...	...	...	...	...	...	...	...	...	2
325	Œdema	...	...	...	...	...	...	...	...	...	...	1	...	1
326	Pneumonia	270	161	205	193	169	168	149	159	130	145	174	223	2,166
	b—Lobar	9	7	10	11	4	4	3	3	4	8	3	3	74
	Double	3	5	8	5	4	5	5	6	1	3	1	5	51
	Pleuro	3	1	...	3	...	1	...	...	1	1	1	4	15
327	Broncho-Pneumonia	119	131	159	177	189	190	183	171	112	106	125	98	1,760
334	Phthisis	163	176	199	201	217	196	192	216	182	171	144	132	2,179
336	Emphysema	6	3	1	7	...	3	...	5	9	2	7	8	51
	DISEASES OF THE PLEURA.													
329	Pleurisy	1	3	3	1	2	3	2	1	2	...	2	...	20
	„ with effusion	1	1	...	1	1	...	2	...	...	2	1	1	10
343	Pneumothorax	...	1	...	1	...	...	...	...	...	1	1	...	4
348	Stomatitis	1	...	...	...	...	...	...	2	...	...	2	2	7
349	Ulceration	...	...	...	...	...	...	...	1	2	...	...	...	3
350	Gangrene	...	...	...	...	...	1	...	...	...	...	...	...	1
	Thrush	...	...	...	...	...	...	...	...	...	...	...	1	1
353	Disorders of Dentition	18	18	15	21	29	26	25	41	26	27	18	16	280
365	Pyorrhœa Alveolaris	...	...	...	...	1	...	...	...	...	...	1	...	2
387	Tonsillitis	...	...	...	...	1	...	1	...	...	1	...	...	3
	Pharyngitis	...	...	...	...	...	...	...	...	...	1	...	...	1
402	Inflammation	1	3	1	...	...	2	1	2	1	...	1	1	13
	Abdominal abscess	1	...	...	...	...	...	...	...	...	...	...	...	1
403	Ulceration	...	...	1	...	...	...	...	...	...	...	...	...	1
	Gastric	...	...	...	...	...	1	2	...	...	...	...	...	3
	Perforating	...	...	...	...	...	...	...	1	...	...	...	1	2
	Gastralgia	...	...	...	...	...	...	...	...	...	...	...	1	1
405	Gangrene	...	...	...	...	...	...	...	1	1	...	...	1	3
	Bowel Complaint	...	...	...	...	...	...	...	...	...	...	...	1	1
407	Hæmorrhage	...	...	...	1	...	...	...	1	...	1	...	...	3

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
414	Gastro-Enteritis	8	3	2	8	10	3	5	13	2	5	5	7	61
419	Dyspepsia	...	1	2	1	5	2	...	2	1	...	3	1	18
	Acute	...	...	1	...	1	...	...	...	...	1	...	...	3
426	Vomitting	...	1	...	...	...	...	...	1	1	...	...	...	3
	Ulcer of the descending color	...	...	...	...	...	...	...	...	...	...	...	1	1
	Intestinal Complaint.	1	...	...	...	...	...	...	...	...	...	...	...	1
	Billious attack	...	...	1	...	...	...	...	...	...	...	...	...	1
	Chronic looseness of bowels	...	...	...	...	...	...	1	...	...	...	...	...	1
433	Inflammation	1	1	...	...	...	...	1	...	...	...	2	...	5
	a—Enteritis	13	9	8	7	10	8	15	17	12	10	8	9	126
	Acute Infective	1	...	...	...	...	...	...	...	...	...	...	...	1
	Muco-Enteritis	2	...	...	...	1	...	1	...	1	...	...	1	6
	Entro-Collitis	...	...	...	...	...	...	1	1	...	...	...	...	2
	Collitis	1	1	2	1	...	1	2	1	...	2	...	...	11
	Acute Illieo-Collitis	...	...	...	1	...	...	...	...	...	...	...	...	1
	Appendicitis	...	2	...	2	...	1	1	...	1	...	...	...	7
	,, Suppurative	...	...	...	...	1	1	...	...	1	...	...	...	3
437	Hæmorrhage	...	...	1	...	...	...	...	...	...	1	...	...	2
	Appendicular abscess	...	...	...	...	...	...	...	1	...	...	...	...	1
444	Sprue	5	8	6	10	7	11	12	9	10	10	9	5	102
	Intestinal Toxæmia	...	...	...	1	...	1	...	...	...	...	...	...	2
448	Volvulus	...	...	...	...	...	...	...	...	...	...	...	2	2
445	Hernia	1	...	...	4	3	...	...	...	1	...	...	...	9
	,, Inguinal	...	1	1	...	...	...	...	...	...	1	...	...	3
	,, Strangulated	2	2	1	...	1	2	1	2	1	1	1	1	15
447	Intussusception	2	...	...	...	...	...	...	...	...	...	2	...	4
453	Obstruction	4	3	5	4	2	2	1	4	7	2	2	1	37
455	Perforation	1	...	...	1	...	...	...	1	...	1	1	...	5
	,, Enteric	...	...	...	...	...	1	...	...	...	...	...	...	1
461	Colic	...	...	2	1	1	2	...	...	...	1	1	1	9
466	Ulceration of rectum	...	...	...	...	...	...	...	1	...	...	...	...	1
468	Fistula in Ano	...	...	...	1	...	1	...	...	...	...	1	2	6
	Fœcal fistula	...	...	...	...	...	...	1	...	...	...	...	...	1
	Ischio and rectal abscess	...	...	...	...	1	...	...	...	1	...	...	...	2
	Fistula ulcerated	...	...	...	...	...	...	...	...	...	1	...	...	1
	Imperforate Anus	...	...	...	...	...	1	...	...	...	...	...	...	1
475	Prolapse Rectum	...	...	...	...	...	...	...	...	...	...	...	1	1
477	Piles	2	5	1	1	2	5	2	2	3	2	3	1	29
	a—Internal	...	...	...	...	...	...	1	...	...	...	...	...	1
	Hæmorrhoids bleeding	...	...	...	...	...	...	...	...	...	...	...	1	1
479	Hepatitis	...	...	...	...	...	...	...	...	...	...	...	...	...
	a—Acute	16	24	22	18	26	22	18	14	12	13	8	16	209
	Hepatic Abscess	4	5	5	4	...	6	1	2	3	2	2	1	35
	,, Cirrhosis	11	13	11	9	5	3	6	7	5	8	7	7	92
	Liver abscess	...	...	...	...	...	...	1	1	...	1	...	3	5
	Hypertrophic Cirrhosis of liver	...	...	...	...	...	...	...	...	1	...	...	...	1
	Enlargement of liver	5	...	2	4	1	2	...	2	...	...	1	1	18
	Portal obstruction	1	...	...	...	...	...	...	...	...	...	...	...	1
481	Congestion of liver	...	...	...	1	...	...	...	1	1	7	1	2	13
484	Atrophy of liver	...	...	...	...	...	1	...	...	...	...	...	...	1
486	Jaundice	4	4	2	1	2	...	3	4	5	3	5	3	36
	Hypertrophy and Dilatation of liver	...	...	...	1	...	...	...	...	...	...	...	...	1
502	Peretonitis	2	4	4	4	2	4	3	3	1	5	4	1	42
	,, Perforating	...	...	...	...	...	...	...	...	1	...	...	...	1
503	Dropsy	12	4	8	17	6	5	7	5	9	8	6	5	92
505	Splenitis	...	...	...	1	...	...	...	1	...	...	...	...	2
	Spleen enlargement	1	...	1	...	1	...	...	1	...	...	...	...	4
508	Abscess	...	...	...	1	...	...	...	...	...	...	...	...	1

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	DISEASES OF THE LYMPHATIC SYSTEM.													
518	Lymphangitis	...	...	1	...	...	...	...	...	...	...	...	...	1
532	Elephantiasis	...	...	...	...	...	...	...	1	...	...	...	1	2
532	Goitre	...	...	...	1	...	...	...	...	...	...	...	...	1
	(*f*)—Exopthalmic Goitre	...	...	...	1	...	...	...	...	...	...	...	...	1
537	Addison's disease	...	...	...	1	...	...	...	...	...	...	...	...	1
538	Acute Nephritis	3	...	...	2	5	5	4	4	6	3	2	3	42
539	Bright's Disease	26	34	26	14	23	29	23	22	21	18	16	28	279
	Large White Kidney	...	...	1	...	...	...	...	...	...	...	...	...	1
	Granular Kidney	...	...	...	1	...	...	...	...	...	...	...	...	1
540	Abscess	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hydro-Pyo Nephrosis	...	1	...	...	...	...	...	...	...	...	...	...	1
	Pyo Nephritis	...	...	1	...	...	...	1	...	...	...	...	1	3
	Renal Colic	...	...	1	...	...	...	1	...	...	...	...	...	2
	Renal Dropsy	...	...	...	...	...	1	...	...	...	...	...	...	1
	Suppression of Urine	1	...	...	...	...	...	1	...	...	1	1	1	5
553	Hæmaturia	...	...	...	...	...	...	...	...	...	1	...	...	1
	Uræmia	1	2	2	...	2	1	...	...	...	1	...	1	10
	,, and coma	...	...	1	...	...	1	...	...	...	..	...	...	2
	,, and intoxication	...	...	...	1	...	...	...	...	...	...	...	...	1
	Enlarged prostate	2	...	1	...	1	...	...	...	1	...	1	...	6
566	Albuminuria	...	...	...	...	...	...	1	...	...	...	2	2	5
561	Cystitis	...	...	1	...	1	...	...	...	...	1	2	...	5
	Pyelitis	...	...	...	1	...	...	...	...	...	1	...	...	2
	Cholco Cystitis	...	...	...	...	1	...	...	...	...	1	...	...	2
	Urinary Fistula	...	...	...	...	...	...	...	...	...	...	...	1	1
572	Calculus	...	...	...	1	1	1	...	...	...	1	1	2	7
	Gall stone and Heart Failure	...	...	...	...	...	...	...	...	...	1	...	...	1
574	Retention of Urine	...	1	...	...	...	...	...	...	2	...	...	1	4
581	Stricture	...	...	...	2	1	...	...	...	...	...	...	...	3
585	Extravasation of Urine	...	1	2	...	...	...	...	...	...	...	...	1	4
603	Ulcer penis	...	...	...	...	...	...	...	1	...	...	...	...	1
604	Gangrene penis	...	...	...	...	...	...	...	1	...	...	...	1	2
610	Abscess Scrotum	1	...	...	...	...	2	...	...	...	...	...	...	3
	Gangrene Scrotum	...	...	...	...	...	...	1	...	...	1	...	...	2
617	Hydrocele	1	...	...	...	...	...	...	...	...	...	...	...	1
	Ovarian disease	...	...	...	...	...	...	...	1	...	...	...	...	1
	Ovaritis	...	...	...	...	...	...	...	1	...	...	...	...	1
649	Inflammation													
	a—Pelvic Peritonitis	...	...	1	1	...	...	...	...	...	...	...	...	2
	b—Pelvic Cellulites	1	...	1	...	1	1	...	...	...	...	...	...	4

20—*continued.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*continued.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
651	Metritis	...	...	...	...	...	...	...	1	...	...	...	...	1
	a—Endo-Metritis	...	...	...	...	...	...	...	...	...	...	...	...	.....
	Peri-Metritis	1	...	...	...	...	...	...	...	...	...	1	...	2
	Uterine Hæmorrhage	1	...	...	...	...	...	...	...	...	...	...	...	1
	Rupture of Uterus during labour	...	...	...	...	...	...	1	...	...	...	1	1	3
	Suppurating Ovary	...	...	...	...	...	1	...	...	...	...	...	...	1
685	Menorrhagia	...	...	...	...	...	...	...	...	...	1	...	...	1
687	Leucorrhœa	...	...	...	...	1	...	...	...	1	...	...	...	2
	Pregnancy	...	...	...	1	1	...	...	...	...	...	...	...	2
	Vomitting during pregnancy	...	1	...	...	2	...	...	...	...	...	...	...	3
700	Abortion	...	1	...	...	...	1	3	1	...	2	1	...	9
	Extra-uterine gestation	...	1	...	...	...	...	...	...	...	...	...	...	1
	Child-birth	...	...	...	1	...	...	...	...	...	...	...	...	1
712	Still-birth	161	137	130	129	121	106	136	158	151	174	146	119	1,668
713	Asphyxia	...	...	...	...	...	1	2	...	...	1	1	...	5
	Obstructed labour	...	...	...	...	...	1	...	...	...	...	...	...	1
714	*Post-Partem* Hæmorrhage	5	2	2	5	4	2	3	...	5	3	1	2	34
715	Retention of Placenta	...	...	...	...	...	...	...	...	...	...	...	...	.....
	Placenta Prævia	...	...	1	1	1	...	1	...	1	...	1	...	6
	Prolonged labour	1	...	...	...	...	...	...	...	...	...	...	...	1
	Premature labour	...	1	...	...	...	...	...	...	...	...	...	...	1
	Labour and exhaustion	3	3	1	3	3	4	4	4	3	1	4	4	37
	Tedious labour and exhaustion	...	...	...	...	...	...	...	...	1	...	...	...	1
	Puerperal state	2	1	...	...	...	...	...	...	...	...	...	...	3
	Difficult labour	...	3	1	...	3	1	...	...	...	2	1	1	12
718	Sudden death after delivery	...	...	...	...	1	...	1	...	...	1	...	...	3
3	Delivery and profuse perspiration	...	...	...	...	...	...	1	...	...	...	...	...	1
734	Chronic Abscess	...	...	...	...	...	...	...	..	...	...	...	...	.....
	Pott's disease	...	...	...	...	...	...	...	1	...	...	...	...	1
735	Caries	2	1	2	...	...	...	1	2	...	...	1	2	11
	Sinus	...	...	...	...	...	...	...	...	..	...	1	...	1
736	Necrosis	...	...	...	...	...	...	...	...	...	1	...	...	1
	Arterio Sclerosis	...	...	...	1	...	...	...	...	...	...	...	...	1
746	Arthritis	...	...	...	...	...	...	1	...	...	...	1	...	2
	a—Synovitis	...	...	...	...	...	...	...	...	...	...	...	...	.....
	b—Suppuration	...	...	...	...	...	...	...	1	...	...	1	1	3
	Ankylotomiasis	...	1	2	...	...	...	...	...	...	...	...	...	3

20—*concluded.*

SPECIFIC CAUSES of DEATHS in 1912 arranged according to the Nomenclature of Diseases drawn up by the Committee of the Royal College of Physicians of London—*concluded.*

	CAUSES OF DEATHS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	Total.
760	Caries	...	1	1	...	2	...	2	...	...	...	...	...	6
761	Necrosis	1	...	...	1	...	...	...	...	...	...	...	...	2
	Curvature	...	1	...	...	...	...	...	...	...	...	...	...	1
762	Psoas lumber *post*-pharyngeal and other abscesses	...	...	3	1	1	2	2	...	...	1	...	...	10
798	Cellulitis	...	3	4	...	...	1	1	2	1	...	...	...	12
	,, diffused Septic	...	...	1	...	...	...	...	...	...	...	...	...	1
799	Abscess	3	2	...	5	1	2	4	2	2	2	4	2	29
800	Gangrene	5	1	6	2	3	3	...	6	6	4	3	3	40
802	Anasarca	...	1	1	1	...	1	...	...	...	3	...	...	7
845	Boils	...	...	...	...	...	...	1	...	...	...	...	...	1
846	Carbuncle	1	1	...	1	1	1	3	2	...	...	3	1	14
	Ulcer	...	...	...	...	..	...	...	...	...	...	...	1	1
	Drowning	8	7	4	4	8	13	9	13	8	11	6	3	94
	Burns and Scalds	8	8	14	6	4	...	1	3	2	2	6	15	69
	Privation and Starvation	21	14	13	16	11	7	6	7	8	13	14	13	143
	Vehicles, Horses and Bullocks ...	6	6	5	9	5	3	3	7	3	1	2	4	50
	Ships, Boats and Docks, excluding drowning	2	3	1	3	3	...	1	...	2	...	2	...	17
	Building Operations	...	...	1	1	1	...	...	2	1	...	...	...	6
	Fall, from houses, trees, stairs, &c.	5	5	3	...	3	6	3	5	3	3	5	3	44
	Sunstroke	...	...	...	1	...	...	1	...	...	1	...	...	3
	Exposure to cold	...	...	...	...	...	1	...	...	...	...	...	...	1
	Machinery	3	5	4	2	2	1	...	1	3	4	3	7	35
	Shock	1	...	...	2	...	...	2	2	...	1	1	1	10
	Suffocation and Strangulation ...	1	4	2	1	2	...	1	1	1	...	...	4	17
	Otherwise or not stated	5	2	3	5	5	5	13	5	7	4	4	9	67
	Incised penetrating and multiple wounds	4	1	...	...	1	1	1	...	1	1	...	...	10
	Suicides other than drowning and poisoning	1	1	...	...	1	2	1	4	...	...	1	...	11
	Fall of earth, rocks, stones, houses, bales, trees, &c., on body ...	...	3	3	3	3	2	9	2	1	2	1	6	35
	Gunshot wounds	...	1	...	...	...	...	2	1	...	1	...	...	5
	Poisons, poisonous vapours and animals	2	2	5	3	8	4	7	5	6	1	4	4	51
	Heat Apoplexy	...	...	...	...	...	2	...	...	...	...	...	...	2
	Explosions	...	...	1	...	...	...	...	...	...	...	...	...	1
	Unspecified Causes	4	7	3	4	...	...	...	...	...	1	2	2	23

TABLE of VACCINE OPERATIONS performed in the City of Bombay in 1912.

Ward.	SECTION.	Population (Census of 1911).	Number of Depôts in each District.	Number of Vaccinators in each District.	Number of persons vaccinated.			Average number of persons vaccinated by each Vaccinator.	Primary Vaccinations.								Re-vaccinations.			Percentage of successful cases where results were known.		Persons successfully vaccinated per 1,000 of population.	Average annual number of persons successfully vaccinated during the past 5 years.		Average annual number of deaths from small-pox during the past 5 years.		Average cost of each successful Vaccination.
									Total.			Successful.																
					Males.	Females.	Total.		Males.	Females.	Total.	Under one year.	One year and under 6 years.	6 years and above.	Total.	Unknown.	Total.	Successful.	Unknown.	Primary Vaccinations.	Re-vaccinations.		Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
																											Rs. a. p.
A	Upper Colaba	1,537	1	1	1,098	399	1,497		247	231	478	355	73	2	430	38	1,019	11	1,001	97·73	61·11	20·77	374	17·61	...	...	
	Middle and Lower Colaba.	19,679																							5	·30	
	Fort, South	3,462	1		480	322	802		260	219	479	375	71	7	453	24	323	19	297	99·56	73·08	16·35	472	16·35	1	·25	
	Fort, North	25,100		1																					14	·49	
	Esplanade	17,761	...		5,647	1,380	7,027		107	106	213	119	23	2	144	67	6,814	5	6,809	98·63	100·00	8·39	147	8·28	7	·56	
B.	Mandvi	33,202	1		264	361	625		243	256	499	339	88	8	480	58	26	...	26	99·54	.....	12·95	399	12·02	14	·37	
	Chukla	24,331			276	267	542		259	265	524	390	98	4	492	23	18	...	18	98·20	.....	20 60	502	20 72	6	·28	
	Umerkhadi	45,679	1	1	533	548	1,081		474	537	1,011	774	186	1	959	33	70	1	65	98·06	20·00	21·02	869	18·02	30	·57	
	Dongri	37,246			447	412	859		377	411	788	641	103	1	745	27	71	...	70	97·90	.....	27·34	804	29·51	11	·34	
C.	Market	30,173	1	1	352	251	603		264	246	510	333	112	2	447	59	93	3	89	99·11	75·00	14·91	403	13·36	15	·43	
	Dhobi Talao	38,684			761	589	1,350		405	478	883	636	158	18	812	59	467	8	452	98·54	53·33	21·20	745	19·25	42	1·18	
	Fanaswadi	27,403			389	312	701		269	275	544	384	112	6	502	33	157	1	150	98·24	14·29	18·36	470	17·15	21	·72	
	Bhuleshwar	36,459			309	293	602		265	293	558	361	127	3	491	51	44	...	43	97·42	.....	18·47	461	12·64	16	·42	
	Khara Talao	22,979			280	273	553		280	273	553	389	85	4	478	65	4,023	1	4,021	97·95	50·00	20·85	405	17·62	18	·49	
	Kumbharwada	27,703	1	1	594	410	1,004		356	353	709	561	105	1	667	24	295	...	292	94·45	.....	24·08	591	21·33	21	·66	
D.	Khetwadi	31,937	1	...	422	379	801		365	351	716	554	105	7	666	39	85	3	72	98·37	23·08	20·95	598	18·72	18	·54	
	Girgaum	30,779			426	434	859		385	420	805	554	178	10	742	53	54	2	49	98·67	40·00	24·11	670	21·77	27	·93	
	Chaupati	11,297			162	137	299		153	133	286	219	59	4	282	4	13	...	12	100·00	.....	24·74	248	21·76	5	·89	
	Walkeshwar	10,640	1	...	189	164	353		146	141	287	217	48	3	268	7	66	7	58	95·71	87·50	25·85	193	18·14	1	·08	
	Mahalakshmi	26,302			362	337	699		309	309	618	492	94	5	591	19	81	11	66	98·66	73·33	22·89	530	20·15	13	·52	
E	Mazagaon	30,075	1	...	713	418	1,131		358	314	672	504	111	8	623	31	459	6	449	97·19	60·00	20·91	625	20·78	18	·58	
	Tarwadi	28,424	...		678	369	1,047		262	324	586	483	53	1	537	44	461	3	458	99·08	100·00	19·00	487	17·13	17	·63	
	2nd Nagpada	21,700																							11	·50	
	Kamathipura	36,751	1	1	898	928	1,826		826	880	1,706	1,347	226	4	1,577	90	120	4	111	97·59	44·44	18·34	1,444	16·75	34	·93	
	Tardeo	27,758																							20	·71	
	Byculla	75,848	1		1,012	1,067	2,079		714	779	1,493	1,159	205	5	1,369	91	586	7	574	97·65	58·33	16·83	1,203	14·71	70	·91	
	1st Nagpada	6,414																							4	1·01	
F.	Parel	45,474	1	1	1,027	803	1,830		515	563	1,078	874	145	...	1,019	43	752	95	619	98·45	71·43	24·50	919	20·21	37	·79	
	Sewri	19,067			266	261	487		222	251	473	365	71	1	437	29	14	...	14	98·42	.....	22·92	352	18·46	8	·48	
	Sion	30,680	1		518	540	1,058		392	395	787	633	119	1	753	26	271	2	268	98·95	66·66	24·61	663	21·61	18	·58	
G.	Mahim	30,492	1		855	728	1,583		755	708	1,463	1,148	248	11	1,407	44	120	2	118	99·15	100·00	46·21	1,216	39 88	9	·28	
	Worli	89,611			938	966	1,904		653	795	1,448	1,193	160	6	1,359	63	456	7	439	98·84	41·18	15·24	1,280	14·28	61	·82	
	Harbour, Docks, Railways and Homeless	44,979	...	...	6,155	976	7,131		422	419	841	167	52	5	224	617	6,290	442	1,017	100·00	8·38	14·81	830	7·34	18	·51	
	Total ...	979,445	14	6	29,272	14,984	44,256	7·376	10,283	10,725	21,008	15,564	3,215	125	18,904	1,764	23,248	640	17,656	98·23	11·44	19·95	17,400	17·77	607	·62	1 7 5

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TABLE of Births registered and of Vaccinations of Infants under one year of age performed in the year 1912.

Ward.	SECTION.	Total number of births exclusive of still-born.	Still born.	Deaths under one year.	Number of Infants surviving.	Number of Infants vaccinated under one year.	Percentage of vaccinations to births registered.
A.	Upper Colaba	98	7	18	80	886	103·20
	Middle and Lower Colaba	276	24	112	164		
	Fort, South	24	2	8	16		
	Fort, North	484	48	205	279	389	76·57
	Esplanade	200	20	80	120	137	68·50
B	Mandvi	487	50	327	160	361	78·23
	Chukla	550	40	259	291	411	74·72
	Umarkhadi	1,205	111	576	629	805	66·80
	Dongri	619	43	412	207	676	109·20
	Market	320	41	189	131	380	118·75
C.	Dhobi Talao	836	73	318	518	680	81·33
	Fanaswadi	534	39	184	350	412	78·62
	Bhuleshwar	616	47	300	316	406	65·90
	Khara Talao	485	55	227	258	410	84·53
	Kumbharwada	602	48	309	293	592	98·33
	Khetwadi	679	33	233	446	590	86·89
	Girgaum	622	54	252	370	594	95·49
D.	Chowpati	217	14	78	139	220	101·38
	Walkeshwar	223	11	66	156	229	103·15
	Mahalakshmi	578	41	238	340	513	88·75
	Mazagaon	829	78	359	470	528	63·69
	Tarwadi	951	58	533	418	519	54·57
	2nd Nagpada	567	55	262	305	1,441	65·73
E.	Kamathipura	896	78	498	398		
	Tardeo	739	52	337	392		
	Byculla	2,428	130	1,020	1,408	1,260	49·41
	1st Nagpada	127	12	59	68		
	Parel	1,175	77	493	682	922	78·46
F.	Sewri	466	41	250	216	385	82·79
	Sion	878	55	316	562	656	74·71
G.	Mahim	978	64	286	692	1,185	121·16
	Worli	1,856	158	837	1,019	1,268	68·04
	Harbour, Docks, Railways and Homeless	...	...	...	...	478	...
	Total	21,518	1,668	9,646	11,872	16,843	78·27

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TABLE of Primary Vaccinations performed with different kinds of Lymph in 1912.

	Number of operations.	Successful.	Unknown.	Percentage of success after deducting the unknown cases.
I Calf Lymph	5,774	5,241	496	99·30
II Glycerinated Lymph	15,255	13,678	1,270	97·80
III Lanolinated Lymph	.....	.....	.....	.....
IV Human Lymph	.....	.....	.....	.....
Total	21,029	18,919	1,766	98·21

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TABLE of prosecutions instituted by the Vaccination Department in 1912.

1	2	3	4	5	6	7
Section of the Act.	Nature of Charge.	Number of Cases instituted.	Number of Cases discharged.	Otherwise.	Number of Cases convicted.	Amount of Fines inflicted.
Section VII of the Bombay Vaccination Act I of 1877.	.....	...	...	...	...	...

TABLE of DEATHS by Disease

Ward.	SECTION.	GENERAL DISEASES.																		
					FEVERS.															
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Enteric Fever.	Malarial Fever.	Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.	Cancer.	Premature Birth.
	Upper Colaba	...	...	3	1	1	2	3	...	...	...	...	2	6	10	...	...	...	5
	Middle and Lower Colaba ...	4	3	66	...	6	13	36	...	...	...	...	34	38	27	3	...	...	6
A.	Fort, South	1	...	4	...	...	4	6	...	...	...	...	6	2	...	...	...	...	1
	Fort, North	11	...	51	...	18	38	128	...	...	...	...	53	78	17	7	...	6	18
	Esplanade	3	3	12	...	3	34	141	...	...	...	1	29	55	27	1	...	2	11
	Mandvi	13	9	65	...	5	30	147	1	...	...	...	175	84	25	20	...	4	3
B.	Chukla	5	2	42	...	1	4	62	...	...	1	...	91	42	29	17	...	2	2
	Umarkhadi	21	6	144	...	7	39	119	...	...	2	1	293	138	64	26	1	5	19
	Dongri	17	48	63	...	3	28	118	...	...	...	...	122	86	93	3	1	...	8
	Market	19	...	41	...	6	8	60	...	...	...	...	28	62	26	12	...	2	2
	Dhobi Talao	26	3	64	...	19	13	83	...	...	4	...	90	91	38	14	...	6	19
	Fanaswadi	25	2	53	...	11	6	49	...	...	2	...	61	55	17	10	...	...	3
C.	Bhuleshwar	18	5	70	...	3	8	55	...	...	...	...	58	121	46	11	2	2	6
	Khara Talao	11	2	53	...	2	13	91	...	...	...	...	45	65	41	27	1	1	6
	Kumbharwada	27	3	46	...	3	10	67	...	...	1	...	64	77	28	12	...	2	5
	Khetwadi	9	3	44	...	8	8	40	...	...	3	...	41	64	31	6	...	2	17
	Girgaum	25	1	54	...	10	3	59	...	...	2	...	72	44	29	17	...	4	23
D.	Chowpati	1	1	12	...	8	5	14	...	...	1	...	9	19	11	1	...	5	8
	Walkeshwar	4	...	7	...	...	4	9	...	...	1	...	9	13	7	2	...	1	7
	Mahalakshmi	24	19	49	...	5	2	74	...	...	...	...	29	95	43	8	3	...	3
	Mazagon	68	1	70	...	5	4	148	...	...	...	...	46	103	97	13	...	1	7
	Tarwadi	44	9	72	...	4	22	178	...	...	...	1	69	199	131	9	...	4	8
	2nd Nagpada	13	3	19	...	3	9	92	...	...	...	...	26	70	76	26	2	1	2
E.	Kamathipura	46	16	48	...	...	4	196	...	...	...	...	47	131	75	37	1	3	4
	Tardeo	24	12	30	...	3	4	107	...	...	...	...	29	132	42	15	...	...	3
	Byculla	183	17	152	...	7	10	237	1	...	...	1	111	402	187	30	...	4	14
	1st Nagpada	5	...	4	...	1	3	15	...	...	...	...	4	16	10	4	...	1	2
	Parel	94	6	95	...	2	14	240	...	...	...	1	29	148	51	17	...	2	1
F.	Sewri	17	2	24	...	...	4	107	...	...	...	...	17	73	29	11	...	...	3
	Sion	26	5	30	...	5	4	85	...	...	...	...	27	113	63	13	31	2	...
	Mahim	33	12	89	...	1	4	56	...	...	5	...	8	121	45	12	1	2	...
G.	Worli	151	17	137	...	5	3	226	...	...	...	...	56	252	138	33	3	4	3
	Harbour, Docks, Railways and Homeless	12	...	4	...	2	3	22	...	...	...	...	10	2	4	...	...	...	...
	TOTAL ...	979	210	1,717	1	152	360	3,070	2	...	22	5	1,790	2,987	1,557	417	96	67	219

and Section in 1912.

					LOCAL DISEASES.												INJURIES.					
								Respiratory System.									General.					
Debility.	Old Age.	Tubercle of Lungs.	All other Tubercular Diseases.	Other General Diseases.	Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	Phthisis.	Other Diseases of the Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	Drowning.	Other General Injuries.	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
1	6	3	1	7	6	1	7	8	19	7	...	3	2	7	...	...	...	2	2	...	...	108
33	14	4	4	26	29	1	10	26	145	25	...	3	5	24	2	...	1	9	7	1	...	581
1	2	...	1	1	5	...	3	...	7	4	...	4	1	2	...	...	...	2	1	1	...	57
60	61	11	19	55	32	...	25	76	194	51	1	17	5	48	3	1	2	6	5	2	...	1,045
27	9	22	9	29	13	...	11	18	117	19	1	18	1	20	3	...	4	41	10	1	1	676
62	101	8	9	113	81	...	10	87	466	30	...	15	7	50	3	1	1	5	4	2	10	1,595
66	79	8	9	109	79	...	11	86	324	47	...	9	6	40	4	...	2	8	2	3	...	1,152
113	108	4	68	193	212	1	11	277	653	71	1	30	9	111	10	2	...	18	13	2	1	2,667
115	43	7	19	81	52	...	6	33	412	59	1	2	2	43	3	1	2	3	10	2	...	1,473
37	54	9	13	51	52	...	19	37	237	44	...	9	3	41	3	...	4	8	1	2	...	849
69	45	19	11	111	95	1	28	34	341	81	1	35	15	73	5	2	9	17	5	3	...	1,397
49	43	6	13	44	47	...	21	20	211	44	...	14	9	39	3	...	...	5	4	1	...	828
79	94	6	15	165	96	3	20	34	421	86	...	14	8	47	3	1	...	11	3	4	...	1,468
69	107	5	11	77	118	1	4	75	270	38	...	6	6	55	3	1	2	10	3	...	...	1,169
80	72	3	5	81	113	...	11	78	303	37	1	7	6	48	1	...	1	8	3	...	...	1,155
58	61	4	19	78	53	...	19	91	348	57	...	14	4	33	1	2	...	14	3	2	1	1,005
48	56	10	17	68	79	...	21	80	248	71	1	17	7	54	2	...	1	9	5	2	...	1,085
16	18	1	3	20	21	...	4	25	86	31	...	4	2	14	1	...	1	1	3	...	...	332
17	8	1	3	21	10	1	11	12	51	16	...	3	...	11	2	...	1	2	1	...	1	225
68	82	1	5	72	44	...	12	43	209	35	...	8	4	41	4	...	2	2	4	1	1	901
88	77	6	21	73	60	...	7	21	312	33	1	6	9	78	2	...	5	9	5	...	...	1,298
118	82	33	52	80	101	...	20	69	371	111	...	24	13	58	26	1	6	69	15	4	...	1,935
61	129	8	7	84	96	...	4	91	308	24	...	13	3	55	5	...	5	5	4	1	...	1,190
128	143	5	14	138	148	...	5	193	504	70	...	31	...	78	7	...	2	5	6	2	1	1,999
82	51	2	10	112	93	...	9	104	271	34	...	5	4	52	2	...	...	4	6	...	...	1,190
329	266	5	25	329	159	...	17	79	1,028	50	1	16	6	139	3	1	5	29	11	7	...	9,722
18	15	1	4	16	14	...	5	19	69	12	...	4	1	12	...	...	...	2	2	...	...	247
203	71	3	13	107	49	...	15	61	376	53	1	14	2	77	6	1	7	24	3	1	...	1,710
108	26	2	...	29	24	...	2	33	160	24	...	8	1	41	2	...	6	3	2	1	2	720
150	25	3	4	51	28	1	9	34	233	31	1	6	2	55	7	1	3	9	3	1	...	1,056
66	46	5	9	33	71	...	17	64	309	31	...	17	3	64	5	...	5	10	4	2	...	1,086
284	151	2	10	165	155	...	11	221	762	51	2	14	10	158	5	1	14	12	14	2	3	2,917
...	9	...	...	2	1	...	3	...	21	3	...	2	...	...	1	...	3	3	6	1	2	116
2,703	2,104	197	418	2,621	2,236	10	388	2,179	9,686	1,360	13	382	156	1,868	131	16	94	365	170	51	23	38,954

TABLE of DEATHS by Race, Cause and Sex in 1912.

RACE OR CASTE.	GENERAL DISEASES.																			
	Small-pox.		Measles.		Plague.		Fevers.										Influenza.		Whooping Cough.	
							Scarlet Fever.		Enteric Fever.		Malarial Fever.		Ague and Remittent Fever.		Relapsing Fever.					
	Males.	Females	Males.	Females	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	8	6	2	2	105	16	...	...	5	1	8	6	69	48	...	...	...	...	...	1
Brahmins	19	13	2	...	60	13	...	...	8	1	7	6	74	49	...	...	...	...	2	1
Lingaits	1	1	...	...	4	2	...	...	...	...	1	...	5	9	...	...	...	...	...	...
Bhatias	1	...	...	...	5	...	...	...	...	1	2	2	16	7	...	...	...	...	...	...
Hindus of other Castes	313	268	46	46	680	329	...	...	38	8	106	43	1,025	560	1	...	...	...	5	2
Hindus, Low Caste	73	68	48	44	80	51	...	...	...	...	15	12	239	176	...	...	...	...	...	...
Mussulmans	65	48	3	11	204	67	...	...	9	5	71	12	348	259	...	...	...	...	1	1
Parsees	2	4	1	...	11	23	...	...	18	14	16	10	84	30	...	...	...	...	1	3
Jews	1	1	1	...	1	4	...	...	3	1	1	1	6	4	1	...	...	...	...	...
Native Christians	48	27	1	1	36	22	...	...	14	5	6	8	52	41	...	...	...	...	1	2
Eurasians	2	...	...	...	1	...	...	...	2	1	3	4	3	2	...	...	...	...	...	...
Europeans	7	3	1	...	3	...	1	...	14	4	10	8	4	4	...	...	...	...	...	2
Negro-Africans	...	...	...	...	...	...	...	...	...	...	...	...	4	2	...	...	...	...	...	...
Buddhists	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Other and Unknown Castes ...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
All Castes ... Males	540	...	106	...	1,190	...	1	...	111	...	248	...	1,879	...	2	...	...	...	10	...
All Castes ... Females	...	439	...	104	...	527	...	...	...	41	...	112	...	1,191	...	...	...	...	...	12
All Castes ... Persons	979		210		1,717		1		152		360		3,070		2		.....		22	

26—*continued.*

TABLE of DEATHS by Race, Cause and Sex in 1912—*continued.*

RACE OR CASTE.	GENERAL DISEASES—*contd.*																			
	Diphtheria.		Cholera.		Diarrhœa.		Dysentery.		Puerperal Septicæmia.		Leprosy.		Cancer.		Premature Birth.		Debility.		Old Age.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.
Jains	...	...	19	2	49	50	24	20	...	19	...	...	3	2	3	3	36	24	32	34
Brahmins	...	...	33	10	54	40	34	19	...	27	1	...	1	...	3	1	39	46	30	36
Lingaits	...	...	1	...	3	3	3	5	...	3	...	...	...	...	...	...	7	6	4	7
Bhatias	...	...	2	1	13	18	2	1	...	6	...	...	...	...	1	...	6	3	15	12
Hindus of other Castes	...	1	614	314	637	662	435	334	...	162	49	17	10	9	38	30	777	659	351	541
Hindus, Low Caste	...	...	74	49	297	274	131	119	...	40	5	...	...	1	14	9	255	227	74	135
Mussulmans	1	...	370	138	294	248	180	111	...	140	10	...	10	3	21	10	256	207	365	334
Parsees	1	1	21	15	56	71	23	21	...	3	...	...	5	13	22	15	22	21	33	44
Jews	...	...	8	14	10	9	11	6	...	4	1	...	...	1	1	2	9	4	8	9
Native Christians	...	...	57	29	79	93	30	24	...	12	7	5	4	3	16	21	44	50	18	14
Eurasians	...	...	...	2	4	6	2	4	...	...	1	...	1	...	1	2	...	...	2	1
Europeans	1	...	5	4	5	11	13	6	...	...	...	...	...	1	6	2	2	1	1	...
Negro-Africans	...	...	3	5	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	1
Buddhists	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...
Other and Unknown Castes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
All Castes... Males	3	...	1,207	...	1,501	...	887	...	...	...	74	...	34	...	126	...	1,454	...	936	...
All Castes... Females	...	2	...	583	...	1,486	...	670	...	417	...	22	...	33	...	93	...	1,249	...	1,168
All Castes... Persons	5		1,790		2,987		1,557		417		96		67		219		2,703		2,104	

TABLE of DEATHS by Race, Cause and Sex in 1912—*continued.*

RACE OR CASTE.	GENERAL DISEASES—*concluded.*						LOCAL DISEASES.													
	Tubercle of Lungs.		Other Tubercular Diseases.		Other General Diseases.		Nervous System		Diseases of the Eye, Ear and Nose.		Circulatory System.		Respiratory System.				Digestive System.		Lymphatic System.		Urinary System.	
													Phthisis.		Other Diseases of the Respiratory System.							
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	3	1	2	9	38	52	51	39	2	1	22	7	17	39	246	152	32	40	1	...	16	8
Brahmins...	3	1	9	14	41	48	59	32	...	1	15	4	25	52	206	155	31	19	...	...	10	5
Lingaits	...	...	...	1	3	4	9	5	...	...	1	1	6	3	15	22	...	2	...	...	...	...
Bhatias	...	...	...	1	10	7	13	8	...	...	4	1	9	21	30	29	7	3	...	...	2	3
Hindus of other Castes	71	15	88	82	531	622	451	393	1	...	88	33	395	550	2,678	2,055	343	223	2	2	87	54
Hindus, Low Caste	3	6	6	4	123	123	118	103	...	1	6	7	104	136	714	636	51	36	1	...	6	6
Mussulmans	37	10	42	75	293	493	393	280	1	1	39	12	269	444	1,304	918	173	123	...	1	44	50
Parsees...	5	3	12	26	63	52	56	62	...	...	48	20	12	20	94	77	30	51	...	4	16	14
Jews	...	...	1	3	8	9	10	12	...	...	4	2	2	4	31	28	7	3	...	...	2	2
Native Christians	24	11	19	20	33	43	70	49	1	...	26	23	32	33	150	100	45	34	1	1	29	13
Eurasians	...	2	2	1	2	5	2	3	...	...	3	5	...	3	9	9	9	10	...	...	2	...
Europeans	1	...	...	1	6	10	9	6	...	1	14	2	...	...	19	7	28	14	...	...	5	4
Negro-Africans	1	...	...	...	1	1	3	...	...	...	...	...	...	3	5	2	...	...	...	...	1	2
Buddhists...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	1
Other and Unknown Castes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...
All Castes ... Males ...	148	...	181	...	1,152	...	1,244	...	5	...	271	...	871	...	5,496	...	802	...	5	...	220	...
All Castes ... Females ...	...	49	...	237	...	1,469	...	992	...	5	...	117	...	1,308	...	4,190	...	558	...	8	...	162
All Castes ... Persons... ...	197		418		2,621		2,236		10		388		2,179		9,686		1,360		13		382	

TABLE of DEATHS by Race, Cause and Sex in 1912—*concluded.*

RACE OR CASTE.	LOCAL DISEASES—*concld.*								INJURIES.													
	Generative System.		Still-born.		Organs of Locomotion and Connective Tissue.		Other Local Diseases.		GENERAL.				Local Injuries.		Poisons.		Unspecified Causes.		All Causes.			
									Drowning.		Other General Injuries.											
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
Jains	...	13	25	9	1	2	1	...	2	...	5	7	5	...	3	...	...	...	810	604	1,414
Brahmins	2	9	45	17	2	2	1	...	1	1	5	5	2	...	1	1	...	...	780	611	1,391
Lingaits	...	...	5	4	...	...	...	...	...	...	...	...	...	1	...	...	...	...	63	75	138
Bhatias	...	1	11	3	1	...	...	...	...	1	1	2	...	1	...	...	...	...	140	129	269
Hindus of other Castes ...	4	42	413	295	33	16	4	1	34	19	122	56	68	10	10	9	13	1	10,153	8,165	18,318
Hindus, Low Caste ...	1	12	157	109	6	4	...	...	5	4	11	7	16	5	3	2	...	...	2,479	2,297	4,776
Mussulmans	7	39	192	167	24	14	2	2	11	2	73	30	33	3	7	2	6	1	4,966	4,094	9,060
Parsees	5	6	46	34	4	2	3	2	3	...	9	2	6	1	3	2	...	...	684	630	1,314
Jews	...	1	12	9	...	1	...	...	...	...	...	1	...	1	...	...	...	...	127	127	254
Native Christians ...	...	13	40	30	9	2	...	...	7	...	9	6	5	3	2	...	1	...	876	708	1,584
Eurasians	...	1	3	2	1	...	...	...	...	...	1	...	...	...	2	...	...	...	55	61	116
Europeans	...	...	1	4	1	1	...	...	...	...	6	1	6	1	2	2	...	...	159	96	255
Negro-Africans	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21	16	37
Buddhists	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	7	3	10
Other & Unknown Castes.	...	...	17	15	...	...	...	...	2	2	5	1	...	2	...	...	1	...	9	9	18
All Castes... Males ...	19	...	969	...	87	...	11	...	65	...	247	...	142	...	33	...	21	...	21,329	...	...
All Castes... Females ...	...	137	...	699	...	44	...	5	...	29	...	118	...	28	...	18	...	2	...	17,625	...
All Castes... Persons ...	156		1,668		131		16		94		365		170		51		23		38,954		

TABLE of DEATHS by Age, Sex and Cause in 1912.

AGE.		GENERAL DISEASES.																			
		Small-pox.		Measles.		Plague.		Fever.										Influenza.		Whooping Cough.	
								Scarlet Fever.		Enteric Fever.		Malarial Fever.		Ague and Remittent Fever.		Relapsing Fever.					
		Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.
DAYS	1 to 30	6	4	1	...	...	...	...	...	...	...	...	...	9	11	...	...	...	...	...	...
MONTHS ...	1 to 6	53	68	10	7	1	...	...	...	2	...	3	4	50	33	...	...	...	...	1	2
	7 to 12	66	77	36	28	1	...	...	...	2	1	14	3	71	74	...	...	...	...	4	6
YEARS ...	1 to 2	47	49	25	29	1	...	...	...	...	1	7	3	59	62	...	...	...	...	2	2
	2 to 3	36	32	12	15	2	1	...	...	...	...	4	4	36	36	...	...	...	...	2	2
	3 to 4	10	19	8	5	6	7	...	...	...	2	1	2	22	30	...	...	...	...	...	...
	4 to 5	23	21	2	7	9	5	...	...	1	...	3	2	22	38	...	...	...	...	...	...
	5 to 10	33	43	8	9	58	73	...	...	4	2	8	6	115	113	...	...	...	...	1	...
	10 to 15	37	38	1	...	116	79	...	...	10	6	13	4	115	101	...	...	...	...	...	...
	15 to 20	74	31	3	2	254	94	1	...	20	11	23	16	232	155	...	...	...	...	...	...
	20 to 25	73	37	...	2	253	73	...	...	26	3	33	13	291	152	2	...	...	...	...	...
	25 to 30	36	11	1	...	167	68	...	...	11	6	36	16	231	126	...	...	...	...	...	...
	30 to 35	22	8	...	...	109	41	...	...	10	4	29	6	166	66	...	...	...	...	...	...
	35 to 40	10	4	...	...	81	33	...	...	9	1	18	9	154	58	...	...	...	...	...	...
	40 to 45	2	2	...	...	51	13	...	...	6	...	10	7	66	27	...	...	...	...	...	...
	45 to 50	6	2	...	...	42	18	...	...	4	2	17	3	94	34	...	...	...	...	...	...
	50 to 55	3	...	...	...	9	2	...	...	3	1	13	2	42	17	...	...	...	...	...	...
	55 to 60	3	3	...	...	19	18	...	...	...	...	3	4	49	28	...	...	...	...	...	...
	60 & over	...	...	...	...	11	2	...	...	3	1	8	8	55	30	...	...	...	...	...	...
	Unspecified Age ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL AGES.	Males	540	...	106	...	1,190	...	1	...	111	...	248	...	1,879	...	2	...	...	...	10	...
	Females	...	439	...	104	...	527	...	...	...	41	...	112	...	1,191	...	...	...	...	...	12
	Persons	979		210		1,717		1		152		360		3070		2		...		22	

TABLE of DEATHS by Age, Sex and Cause in 1912—*continued.*

AGE.		GENERAL DISEASES—*contd.*																	
		Diphtheria.		Cholera.		Diarrhœa.		Dysentery.		Puerperal Septicæmia.		Leprosy.		Cancer.		Premature Birth.		Debility.		Old Age.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
DAYS	1 to 30	...	...	...	...	17	29	2	3	...	...	...	...	...	...	126	92	1,174	978	...	...
MONTHS	1 to 6	...	...	1	1	107	132	11	8	...	...	...	...	...	...	...	1	181	173	...	...
	7 to 12	...	1	3	1	228	264	37	62	...	...	...	...	...	...	...	...	38	37	...	...
YEARS	1 to 2	1	...	9	2	193	219	55	71	...	...	...	...	...	...	...	...	14	18	...	...
	2 to 3	...	...	13	7	84	105	59	72	...	...	...	...	...	...	...	...	1	6	...	...
	3 to 4	...	...	16	6	57	45	33	42	...	...	...	...	...	...	...	...	1	2	...	...
	4 to 5	...	...	11	15	22	14	20	32	...	...	...	...	...	...	...	...	1	..	...	...
	5 to 10	...	...	36	47	44	46	46	67	...	...	...	...	...	...	...	...	3	4	...	...
	10 to 15	1	1	68	30	17	24	33	17	...	4	2	2	...	...	...	...	...	...	...	...
	15 to 20	1	...	146	78	48	52	66	27	...	106	2	2	1	2	...	...	1	1	...	...
	20 to 25	...	...	242	83	84	81	101	49	...	162	8	3	1	1	...	...	3	2	...	...
	25 to 30	...	...	217	87	79	63	100	58	...	99	10	...	2	1	...	...	10	1	...	...
	30 to 35	...	...	129	58	75	55	61	28	...	26	6	1	4	1	...	...	7	3	...	...
	35 to 40	...	...	114	50	89	55	70	39	...	15	16	1	5	4	...	...	4	6	...	...
	40 to 45	...	...	56	26	58	29	41	24	...	3	10	5	3	3	...	...	5	6	...	...
	45 to 50	...	...	62	33	76	58	52	14	...	1	6	7	5	5	...	...	11	12	...	...
	50 to 55	...	...	19	14	37	20	21	9	...	...	4	...	4	2	...	...	...	...	16	14
	55 to 60	...	...	48	23	73	65	36	30	...	...	6	...	4	9	...	...	...	...	91	103
	60 and over	...	...	17	22	112	130	44	28	...	...	4	1	5	5	...	...	...	...	829	1,046
	Unspecified Age	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
ALL AGES.	Males	3	...	1,207	...	1,501	...	887	...	...	...	74	...	34	...	126	...	1,454	...	936	...
	Females	...	2	...	583	...	1,486	...	670	...	417	...	22	...	33	...	93	...	1,249	...	1,168
	Persons	5		1,790		2,987		1,557		417		96		67		219		2,703		2,104	

TABLE of DEATHS by Age, Sex and Cause in 1912—*continued.*

AGE.	GENERAL DISEASES—*contd.*						LOCAL DISEASES.															
	Tubercle of Lungs.		Other Tubercular Diseases.		Other General Diseases.		Nervous System.		Diseases of the Eye, Ear and Nose.		Circulatory System.		Respiratory System. Phthisis.		Respiratory System. Other Diseases of the Respiratory System.		Digestive System.		Lymphatic System.		Urinary System.	
	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.
DAYS ... 1 to 30	...	...	...	...	10	10	201	146	...	1	...	1	...	...	36	34	11	9	...	...	1	...
MONTHS 1 to 6	...	...	3	1	47	44	484	419	...	...	...	...	...	4	654	593	37	41	...	...	...	1
MONTHS 7 to 12	...	...	1	...	160	168	171	149	...	2	1	1	...	...	786	774	123	122	...	2	1	...
YEARS 1 to 2	...	1	3	...	182	204	68	51	1	1	1	1	...	...	446	479	83	88	1	...	1	1
YEARS 2 to 3	1	...	1	4	130	131	18	15	...	1	...	...	1	3	143	193	21	17	...	...	4	2
YEARS 3 to 4	...	...	1	1	65	76	5	8	...	...	...	...	1	2	59	89	4	7	...	...	2	...
YEARS 4 to 5	...	...	...	3	21	33	2	4	...	...	1	1	1	4	60	66	4	2	...	...	1	2
YEARS 5 to 10	1	1	8	10	31	61	9	9	...	...	3	5	14	33	94	134	12	11	...	...	2	6
YEARS 10 to 15	...	4	8	21	29	63	8	10	2	...	2	2	32	100	83	71	18	5	1	...	4	4
YEARS 15 to 20	21	12	24	61	64	161	11	18	1	...	14	12	152	260	246	100	31	33	1	1	15	15
YEARS 20 to 25	28	15	30	48	81	167	9	13	...	...	27	19	148	280	350	134	59	46	...	1	13	23
YEARS 25 to 30	38	9	32	36	96	129	20	25	...	...	40	14	178	260	351	121	73	36	...	...	24	19
YEARS 30 to 35	25	2	29	23	54	74	20	10	...	...	27	9	101	144	264	95	75	29	1	1	18	14
YEARS 35 to 40	11	2	16	14	46	65	31	6	...	...	41	14	121	115	302	159	58	35	...	1	14	16
YEARS 40 to 45	11	2	12	9	39	19	21	9	...	...	23	8	62	53	215	81	46	25	...	...	19	10
YEARS 45 to 50	6	1	7	2	30	15	38	13	...	...	20	7	35	35	395	255	53	16	...	...	34	6
YEARS 50 to 55	2	...	1	1	14	18	25	9	...	...	17	3	6	7	186	118	26	5	...	1	17	9
YEARS 55 to 60	3	...	4	...	24	11	36	20	1	...	21	3	12	6	452	395	29	10	...	...	18	8
YEARS 60 and over	1	...	1	3	38	20	72	59	...	...	33	17	7	2	374	299	33	21	1	1	32	26
Unspecified Age	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL AGES. Males	148	...	181	...	1,152	...	1,244	...	5	...	271	...	871	...	5,496	...	802	...	5	...	220	...
ALL AGES. Females	...	49	...	237	...	1,469	...	992	...	5	...	117	...	1,303	...	4,190	...	558	...	8	...	162
ALL AGES. Persons	197		418		2,621		2,236		10		388		2,179		9,686		1,360		13		382	

TABLE of DEATHS by Age, Sex and Cause in 1912—*concluded.*

AGES.		LOCAL DISEASES—*concluded.*								INJURIES.												All Ages.
		Generative System.		Still-born.		Organs of Locomotion and Connective Tissue.		Other Local Diseases.		General.				Local Injuries.		Poisons.		Unspecified Causes.		All Causes.		
										Drowning.		Other General Injuries.										
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
DAYS	1 to 30	4	2	...	...	2	...	...	...	...	...	6	7	...	3	...	...	1	...	1,607	1,330	2,937
MONTHS	1 to 6	...	...	...	...	3	2	...	1	...	...	2	1	...	...	...	2	...	...	1,650	1,538	3,188
	7 to 12	...	...	...	...	1	...	...	...	1	...	...	1	1	...	1	1	...	...	1,747	1,774	3,521
YEARS	1 to 2	...	...	...	...	1	1	...	...	...	1	2	2	1	1	1	1	...	...	1,310	1,290	2,600
	2 to 3	...	...	...	...	...	2	...	...	...	1	5	1	1	1	...	1	...	...	574	652	1,226
	3 to 4	...	...	...	...	...	1	...	...	...	...	4	3	...	1	...	1	...	...	295	349	644
	4 to 5	...	...	...	...	...	...	...	...	...	...	3	2	2	...	...	...	...	...	209	251	460
	5 to 10	...	...	...	...	1	2	...	...	2	1	7	11	11	3	...	...	...	...	551	697	1,248
	10 to 15	...	4	...	...	2	3	...	...	6	3	7	5	11	1	1	1	...	1	622	594	1,216
	15 to 20	...	28	...	...	3	4	1	...	7	3	14	11	12	1	2	5	1	...	1,496	1,307	2,803
	20 to 25	3	46	...	...	7	9	2	...	14	4	33	17	26	2	6	2	6	...	1,959	1,487	3,446
	25 to 30	1	27	...	...	14	3	1	...	7	4	33	5	25	3	4	3	3	...	1,840	1,230	3,070
	30 to 35	1	18	...	...	10	2	...	1	10	...	26	10	17	2	4	...	1	...	1,801	731	2,032
	35 to 40	2	7	...	...	9	1	...	...	4	2	17	5	10	...	3	...	1	1	1,261	718	1,979
	40 to 45	1	3	...	...	6	...	2	1	1	1	17	4	3	1	3	...	3	...	792	371	1,163
	45 to 50	2	1	...	...	10	6	...	...	...	2	20	11	11	...	2	...	...	...	1,038	558	1,596
	50 to 55	...	...	...	...	1	1	2	...	3	...	13	4	1	...	...	...	...	...	485	257	742
	55 to 60	2	...	...	...	6	2	1	...	1	...	22	11	2	6	...	1	2	...	972	751	1,723
	60 & over	3	1	...	...	6	5	2	2	6	...	15	7	7	3	1	...	...	...	1,710	1,739	3,449
Unspecified Age		...	...	...	...	...	...	...	...	3	...	1	...	1	...	...	...	3	...	10	1	11
ALL AGES.	Males	19	...	969	...	87	...	11	...	65	...	247	...	142	...	33	...	21	...	21,329	...	...
	Females	...	137	...	699	...	44	...	5	...	29	...	118	...	28	...	18	...	2	...	17,625	...
	Persons	156		1,668		131		16		94		365		170		51		23		...		38,954

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TABLE of DEATHS by DISEASE and

Title of Orders.	Occupation or Trade of Family.	GENERAL DISEASES.															
					FEVER.												
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Enteric Fever.	Malarial Fever.	Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.
Professional General	1 (a) Imperial Government Officials, Clerks, &c.	..	..	3	..	5	..	3	..	..	..	..	6	2	2	..	..
Government	2 (b) Foreign Government Consuls, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	3 (c) Native States, Chiefs, Staffs, Retinue, &c.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
	4 (d) Mun. and Local Government Police, &c.	..	..	3	..	..	1	2	..	..	..	..	9	2	2	..	..
	Post and Telegraph Office, Peons, &c.	3	..	10	..	3	3	19	..	..	..	..	13	2	3	..	..
Defence	5 (a) Army	1	..	..	1	..	1	..	..	..	..	..	..	..	2	..	..
	6 (b) Navy	..	..	..	..	2	1	..	..	..	..	..	1	..	1	..	..
Learned Professions.	7 (a) Ministers of Religions; Professors, &c.	1	..	6	..	1	3	7	..	..	..	..	7	9	3	1	..
	8 (b) Law, Medical Literature (Science), &c.	..	..	..	..	1	1	3	..	..	..	..	3	..	1	..	..
	9 Unlicensed Practitioners, Dentists, Opticians, Nurses, &c.	2	..	3	..	..	2	2	..	..	..	..	2	2	..	..	1
Commercial	10 (a) General Merchants in Special Goods	1	..	30	..	3	5	27	..	..	..	..	27	24	9	..	1
	11 (b) Bankers, Accountants, Clerks, Capitalists, Shroffs, &c.	2	..	19	..	17	5	30	..	..	..	..	21	27	5	..	..
	12 (c) Shopkeepers, other General Dealers, Hawkers, &c.	10	..	76	..	4	14	94	..	..	..	..	79	58	34	3	..
	13 (d) Intoxicating Drinks and Drugs Dealers	2	..	6	..	..	2	1	..	..	..	..	4	3	2	..	..
	14 (e) Vegetable Food Dealers	..	..	2	..	..	1	3	..	..	..	..	7	3	..	..	1
	15 (f) Vegetable Substance Makers and Dealers	..	..	5	..	..	..	5	..	..	..	..	2	1	2	2	..
	16 (g) Animal Food Dealers, Fishers, &c.		..	24	..	..	..	5	..	..	..	..	11	8	5	2	1
	17 (h) Animal Substance Makers and Dealers	1	..	11	..	..	..	16	..	..	..	..	6	5	2	..	..
	18 (i) Entertainers, Hotel, Club, Refreshment House Keepers	1	..	17	..	..	1	7	..	..	..	..	2	1	5	..	..
	19 (j) Carriers on Road, Horse, Carriage, Cart Keepers	3	..	47	..	1	4	32	..	..	..	..	39	26	24	1	1
	20 (k) Carriers on Seas, Boatmen, Seamen, &c.	1	..	8	..	3	6	35	..	..	..	..	38	5	10	..	1
Railway	21 (a) Officials, Clerks, &c.	..	..	2	..	5	1	6	..	..	..	..	6	4	4	..	..
	22 (b) Workshop Servants, &c.	..	..	3	..	..	..	3	..	..	..	..	4	2	2	..	..
	23 (c) Labourers, Earth-workers, &c.	1	..	4	..	..	2	14	..	..	..	..	13	1	1	..	..
Port and Improvement Trust and Harbour.	24 (a) Officials, Clerks, &c.	..	..	1	..	..	1	2	..	..	..	..	3	..	1	..	..
	25 (b) General Labourers, &c.	..	..	5	..	1	2	19	..	..	..	..	14	3	4	..	..
Tramway	26 (a) Officials, Clerks, &c.	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..
	27 (b) General Labourers	..	..	1	..	2	..	1	..	..	..	..	2	1	4	..	..
Industrial	28 (a) Metal, &c., Workshop-keepers, Mechanical Tools Makers	..	..	1	..	..	..	3	..	..	..	..	6	..	3	..	1
	29 (b) Metal, &c., Workshop Servants, Labourers, &c.	4	..	15	..	3	4	24	..	..	..	..	7	5	6	..	2
	30 (a) Mills (Cotton, Silk, &c.), Masters, Managers, Clerks, &c.	1	..	5	..	..	..	3	..	..	..	..	3	..	1	1	..
	31 (b) Weavers, Spinners and other Workers	97	1	204	..	1	5	286	..	..	..	..	81	95	108	14	4
	32 (a) Presses (Printing, &c.), Printers, &c.	1	..	9	..	..	1	11	..	..	..	..	10	2	7	..	..
	33 (b) Other General Labourers	10	..	10	..	..	2	47	..	..	..	..	44	7	13	4	..

OCCUPATION in 1912.

Cancer.	Premature Birth.	Debility.	Old Age.	Tubercle of Lungs.	Other Tubercular Diseases.	Other General Diseases.	LOCAL DISEASES. Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	RESPIRATORY SYSTEM. Phthisis.	Other Diseases of Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	INJURIES. GENERAL. Drowning.	Other General Injuries.	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
..	..	..	2	..	1	6	1	..	3	4	8	7	..	3	2	..	1	..	..	1	..	..	..	65
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
1	..	..	1	1	2	..	..	..	2	2	13	..	..	..	..	..	..	..	..	..	..	..	..	41
..	..	..	5	1	1	4	6	..	2	12	48	2	..	1	..	..	1	..	..	..	5	..	..	149
..	..	..	..	..	..	2	1	..	2	1	5	5	..	..	..	..	..	..	..	1	3	..	..	25
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
..	..	..	17	..	2	9	5	..	2	5	25	9	..	4	1	..	2	..	1	1	..	..	..	126
..	..	..	1	..	..	3	3	..	6	2	11	2	..	1	..	..	..	1	..	1	..	3	..	43
..	..	1	3	..	1	1	2	..	3	1	7	1	..	3	..	..	..	..	..	..	1	1	..	38
2	..	4	55	..	4	22	14	..	21	22	83	25	..	6	..	..	4	..	2	3	5	2	..	401
1	..	..	22	2	4	23	19	..	19	12	90	25	..	13	2	..	2	1	2	4	3	2	..	271
3	..	5	76	4	13	38	22	..	22	73	283	6	..	17	4	..	3	1	1	3	4	..	1	961
..	..	..	1	..	1	1	4	..	4	5	15	3	..	1	..	..	..	..	..	..	2	..	..	57
..	..	1	4	..	..	..	..	..	..	6	13	5	..	..	..	..	1	..	..	..	..	..	..	47
..	..	..	3	..	2	1	..	..	..	2	7	2	..	1	..	..	..	..	..	..	..	..	..	35
..	..	..	12	..	..	4	9	..	1	6	30	1	..	2	1	..	..	..	4	2	..	..	..	139
..	..	2	21	..	..	4	1	..	2	7	41	6	..	1	..	..	..	..	..	1	..	..	..	120
..	..	..	7	1	2	7	1	..	4	11	32	4	..	..	..	..	..	..	..	..	1	..	..	104
..	..	2	29	1	4	15	5	..	6	23	134	20	..	4	1	..	3	..	1	4	7	1		489
..	..	1	11	..	1	6	5	..	2	8	59	8	..	5	..	..	1	..	1	1	5	..	1	222
..	..	..	1	..	3	4	2	..	1	3	17	1	..	4	..	..	..	..	..	1	2	1	..	67
..	..	..	5	2	1	3	1	..	3	7	13	3	..	2	..	..	..	..	..	2	3	..	..	56
..	..	..	3	..	..	1	2	..	1	5	16	2	..	2	..	..	..	..	..	1	2	..	..	71
..	..	..	2	..	..	..	..	..	2	..	4	6	..	..	..	..	..	..	..	..	..	..	..	22
..	..	..	3	3	1	6	..	..	2	6	57	3	..	4	..	..	4	..	..	1	1	..	..	143
..	..	..	..	..	..	..	1	..	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	8
..	..	..	1	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	16
..	..	..	1	1	2	2	1	..	2	3	12	3	..	..	..	..	..	..	1	1	..	..	..	45
1	..	..	7	4	4	3	3	..	5	11	49	9	..	4	..	..	1	..	..	6	4	..	..	179
..	..	..	1	..	..	2	4	..	2	3	3	1	..	2	1	..	..	..	..	..	..	..	..	38
2	..	4	124	7	20	85	10	..	7	179	462	40	2	14	3	..	5	..	2	16	10	2	..	1,892
..	..	1	3	1	2	5	1	..	2	10	18	2	..	1	..	..	2	1	..	..	..	..	..	90
..	..	..	10	2	..	13	3	..	2	28	45	1	..	1	..	..	..	..	..	2	..	..	..	249

TABLE of Deaths by DISEASE and

Title of Orders.	Occupation or Trade of Family.	GENERAL DISEASES.																
					FEVER.													
		Small-pox.	Measles.	Plague.	Scarlet Fever.	Enteric Fever.	Malarial Fever.	Ague and Remittent Fever.	Relapsing Fever.	Influenza.	Whooping Cough.	Diphtheria.	Cholera.	Diarrhœa.	Dysentery.	Puerperal Septicæmia.	Leprosy.
Art	34 (a) Engineers, Photographers, Electricians, Architects	1	..	..	..	3	..	4	..	..	..	..	7	4	2	..	..
	35 (b) Builders in Boats, Houses, Coaches, &c.	..	..	2	..	..	..	1	..	..	..	..	..	..	3	..	..
	36 (c) Watchmakers, Gilders, Engravers, &c.	..	..	2	..	..	..	2	..	..	..	..	2	2	4	..	..
	37 (d) Metal Workers	2	..	22	..	1	5	27	..	..	..	1	23	15	17	..	4
	38 (e) Wood Workers	4	..	40	..	5	4	29	1	..	..	..	18	14	13	..	6
	39 (f) Stone Workers (Precious) ..	1	..	3	..	..	..	12	..	..	..	..	3	4	3	..	..
	40 (g) Leather Workers	..	..	7	..	1	1	20	..	..	..	..	8	13	8	..	..
	41 (h) Earth, Stone, Clay, &c., Workers	..	..	1	..	..	..	9	..	..	..	..	5	1	3	..	..
	42 (i) Textile Fabrics (Cotton, Silk, &c.), Workers	..	..	2	..	..	..	..	..	..	..	..	..	2	3	..	..
	43 (j) Dyers, Painters, &c.	..	..	3	..	..	..	8	..	..	..	..	5	11	..	1	1
	44 (k) Glass Workers	..	..	..	..	..	..	3	..	..	..	..	1	2	..	..	..
	45 (l) Salt Workers	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
	46 (m) Water Workers	1	..	..	..	..	..	2	..	..	..	..	2	..	1	..	..
	47 (n) Miscellaneous Workers ..	2	..	17	..	1	1	31	..	..	..	..	12	16	20	2	1
	48 (o) Players, Actors, Dancers, Prostitutes, &c.	..	..	4	..	1	1	2	..	..	..	..	..	7	5	1	1
Agriculture ..	49 (a) Gardeners, Cultivators, Farmers, &c.	2	..	12	..	..	3	22	..	..	..	..	13	6	6	..	24
	50 (b) Grass, Hay, Forage, &c., Dealers	..	..	..	..	..	..	3	..	..	..	..	..	1	..	..	1
Other and unspecified.	51 (a) Barbers, Washers, Tailors, Cooks, Bakers, &c.	21	..	73	..	3	13	90	..	..	..	..	69	39	34	6	10
	52 (b) General Labourers	64	2	196	..	..	32	330	..	..	..	..	295	111	109	4	17
	53 (c) Domestic Servants, Bhistis, Ayahs, &c.	6	..	35	..	1	6	28	..	..	..	..	43	16	16	..	..
	54 (d) Servants not otherwise described	13	..	133	..	8	14	111	..	..	..	..	32	60	39	3	1
	55 (e) Municipal Bigaries, Halalkhors &c.	4	..	28	..	2	9	45	..	..	..	..	66	22	33	5	..
Persons of independent means.	56 (a) Landlords	..	..	..	..	..	1	3	..	..	..	..	1	3	1	..	..
	57 (b) Pensioners	..	..	2	..	..	2	3	..	..	..	..	1	7	7	..	1
	58 (c) Mendicants, &c.	3	..	30	..	..	21	41	..	..	..	..	32	55	27	3	1
Others	59 (a) Students	2	..	11	..	14	..	17	..	..	..	..	7	7	10	..	2
	60 (b) Prisoners and Convicts ..	..	..	..	..	..	..	1	..	..	..	..	..	2	3	..	..
	61 (c) Others (Pilgrims, Travellers, etc.)	11	..	1	..	..	11	30	..	..	..	..	3	19	6	..	..
	62 Persons following no occupations—Male ..	15	..	54	..	3	24	66	1	..	..	..	74	109	75	1	3
	63 Do. no occupations—Female ..	89	5	234	..	30	73	515	..	..	2	1	353	596	245	356	6
	64 Do. no occupations—Children ..	593	202	275	..	22	71	352	..	..	20	3	181	1,519	538	7	4
	Total ..	979	210	1,717	1	152	360	3,070	2	..	22	5	1,790	2,987	1,557	417	96

—*concld.*

OCCUPATION in 1912—*concluded.*

Cancer.	Premature Birth.	Debility.	Old Age.	Tubercle of Lungs.	Other Tubercular Diseases.	Other General Diseases.	LOCAL DISEASES. Nervous System.	Diseases of the Eye, Ear and Nose.	Circulatory System.	Respiratory System. Phthisis.	Respiratory System. Other Diseases of the Respiratory System.	Digestive System.	Lymphatic System.	Urinary System.	Generative System.	Still-born.	Organs of Locomotion and Connective Tissue.	Other Local Diseases.	INJURIES. General. Drowning.	General. Other General Injuries.	Local Injuries.	Poison.	Unspecified Causes.	TOTAL.
1	..	..	2	..	..	6	2	..	1	4	7	6	..	5	..	..	1	..	..	2	..	..	..	33
..	..	..	1	..	..	1	..	..	..	2	4	..	..	..	..	..	..	..	..	1	..	..	..	10
..	..	..	..	1	..	3	1	..	..	5	2	..	..	..	..	..	1	..	..	1	..	..	..	26
2	..	..	18	2	4	13	3	..	2	11	37	12	..	2	..	..	1	..	1	1	2	3	..	281
1	..	1	26	1	1	16	6	..	9	16	77	19	..	5	..	..	..	..	2	..	1	..	1	307
..	..	..	5	..	1	6	..	..	..	4	31	..	..	..	..	..	..	..	..	..	1	..	..	74
..	..	..	24	1	2	4	3	..	..	16	44	5	..	1	..	..	..	..	..	1	2	..	..	161
..	..	..	1	..	..	1	..	..	..	5	12	..	..	1	..	..	..	..	..	..	..	..	..	39
..	..	..	2	..	..	1	..	..	1	3	12	..	..	..	..	..	..	..	..	..	..	..	..	26
..	..	..	15	4	5	9	..	..	5	12	39	5	..	..	..	..	..	..	..	..	..	..	..	123
..	..	..	1	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	10
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2
..	..	..	..	..	..	1	..	..	..	1	3	1	..	1	..	..	1	..	..	..	..	1	..	20
3	..	..	42	2	6	9	7	..	1	37	66	19	1	4	..	..	3	..	..	5	..	..	..	303
..	..	1	5	1	1	2	3	..	..	13	12	3	..	..	..	..	..	..	..	3	1	2	..	75
1	..	1	22	1	4	5	3	..	2	12	41	9	..	3	1	..	4	..	1	3	..	1	..	202
..	..	..	2	..	..	..	..	..	..	1	2	..	..	..	..	.	..	..	..	..	..	..	....	10
2	..	6	114	16	17	38	20	1	17	59	257	47	..	17	2	..		..	3	3	6	6	..	1,012
..	..	8	101	19	17	67	14	..	6	163	594	32	1	18	4	..	10	1	9	43	31	4	..	2,801
1	..	..	13	6	2	8	7	..	6	26	89	11	2	4	..	..	1	..	3	3	3	1	..	334
4	..	4	41	9	14	33	17	1	21	69	198	36	..	13	2	..	4	4	2	6	4	2	..	940
1	..	..	26	3	2	11	8	..	7	26	121	3	..	4	..	..	1	..	..	1	3	2	..	434
..	..	1	2	..	1	4	3	..	5	4	15	7	..	..	..	..	..	1	..	1	..	..	..	60
2	..	2	41	1	..	9	19	..	11	..	27	5	..	2	..	..	..	1	..	..	..	..	..	142
2	..	7	56	25	15	29	6	..	9	57	155	10	..	18	2	..	4	..	5	40	6	..	10	667
..	..	..	..	..	7	3	2	..	3	8	12	2	..	3	..	..	..	..	1	1	2	..	..	114
..	..	..	2	..	..	1	..	..	..	1	..	2	..	..	..	..	1	..	..	3	..	..	..	16
..	..	1	14	..	..	2	1	..	1	1	9	2	..	3	..	..	1	..	..	19	1	..	..	136
6	..	5	153	34	30	56	53	..	38	72	249	47	..	29	4	..	16	2	19	37	12	2	7	1,306
30	..	178	987	34	168	705	276	..	94	944	1,597	262	4	124	108	..	31	3	14	72	15	7	..	8,109
1	219	2,467	..	7	52	1,311	1,646	8	18	148	4,341	579	3	29	18	..	16	..	12	61	25	8	2	15,208
67	219	2,703	2,104	197	418	2,621	2,286	10	388	2,179	9,686	1,360	13	382	156	..	131	16	94	365	170	51	28	38,954

TABLE of DEATHS by Race, Age and Sex in 1912.

RACE.	AGES.																					
	1 to 30 days.		1 to 6 months.		7 to 12 months.		1 to 2 years.		2 to 3 years.		3 to 4 years.		4 to 5 years.		5 to 10 years.		10 to 15 years.		15 to 20 years.		20 to 25 years.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Jains	39	30	52	55	66	92	39	44	15	14	5	3	5		18	13	41	24	82	67	85	58
Brahmins	55	38	58	66	59	67	40	24	10	22	6	10	7	5	16	25	27	17	59	80	94	59
Lingaits	6	6	13	6	8	7	...	7	1	1	3	5	3	...	...	4	...	5	4	3	9	9
Bhattias	8	5	14	7	14	4	8	6	4	3	...	...	1	1	3	2	4	8	8	10	5	15
Hindus of other Castes ...	803	671	714	693	784	867	540	627	284	320	158	179	106	146	270	335	309	263	798	520	1,051	664
Hindus, Low Caste	246	324	292	234	365	329	247	235	109	138	59	53	35	31	74	103	67	65	146	138	167	164
Mussalmans	285	209	350	308	309	287	243	254	117	115	48	77	38	52	137	167	125	186	310	409	398	394
Parsees	44	35	48	40	67	45	43	41	14	13	2	10	4	8	9	12	14	6	12	26	33	34
Jews	17	5	6	15	15	10	13	10	4	1	...	2	3	2	5	10	3	3	1	8	8	7
Native Christians	86	94	88	100	41	50	26	39	13	18	10	7	5	4	17	18	27	16	66	42	90	66
Eurasians	4	3	8	6	5	7	3	1	1	1	2	...	1	...	...	2	1	...	2	4	4	7
Europeans	8	5	7	8	10	9	8	1	1	5	2	3	1	1	2	4	3	1	6	4	14	6
Negro-Africans	1	...	...	...	4	...	...	...	1	...	...	...	...	...	...	2	...	...	1	1	1	3
Buddhists	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Other and Unknown Castes ...	5	5	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...
All Castes ... Males ...	1,607	...	1,650	...	1,747	...	1,210	...	574	...	295	...	209	...	551	...	622	...	1,496	...	1,959	...
All Castes ... Females ...	...	1,330	...	1,538	...	1,774	...	1,290	...	652	...	349	...	251	...	697	...	594	...	1,307	...	1,487
All Castes ... Persons ...	2,937		3,188		3,521		2,500		1,226		644		460		1,248		1,216		2,803		3,446	

TABLE of DEATHS by Race, Age and Sex in 1912—*concluded.*

Race.	Ages—*concld.*																		
	25 to 30 years.		30 to 35 years.		35 to 40 years.		40 to 45 years.		45 to 50 years.		50 to 55 years.		55 to 60 years.		60 and over.		Unspecified Ages.		All Ages.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	Males	Females	Males.	Females	Males.	Females.	Males.	Females.	Persons.
Jains	71	34	46	32	39	21	38	14	42	20	41	9	37	18	49	55	...	...	810	604	1,414
Brahmins	67	42	45	23	38	25	37	11	43	7	24	14	37	12	58	64	...	...	780	611	1,391
Lingaits	4	1	...	3	3	2	1	4	2	2	1	...	1	4	4	6	...	...	63	75	138
Bhatias	5	8	10	5	4	12	9	3	9	5	11	11	3	2	20	22	...	...	140	129	269
Hindus of Other Castes	970	555	695	369	625	316	361	179	486	260	184	97	381	361	627	742	7	1	10,153	8,165	18,318
Hindus, Low Caste	153	126	93	48	105	62	41	22	62	66	19	13	90	99	109	152	...	...	2,479	2,397	4,776
Mussalmans	443	339	300	179	332	196	208	81	277	183	124	71	330	184	591	453	1	...	4,966	4,094	9,060
Parsees	24	30	19	27	26	31	30	24	43	29	40	22	43	34	160	163	...	...	684	630	1,314
Jews	3	11	4	5	5	8	6	5	7	5	4	1	7	5	16	14	...	...	127	127	254
Native Christians	73	63	71	35	58	35	38	17	56	25	26	9	31	25	54	45	...	...	376	708	1,584
Eurasians	3	7	2	2	3	3	2	5	...	...	5	3	4	2	5	8	...	...	55	61	116
Europeans	18	6	15	3	18	6	11	6	10	4	6	7	6	3	18	14	...	...	159	96	255
Negro-Africans	3	6	1	...	3	1	...	...	1	1	...	...	2	1	3	1	...	...	21	16	37
Buddhists	3	1	...	...	1	...	1	...	...	...	...	...	...	1	1	..	...	...	7	3	10
Other and Unknown Castes ...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	2	...	9	9	18
All Castes. Males	1,840	...	1,301	...	1,261	...	792	...	1,038	...	485	...	972	...	1,710	...	10	...	21,329	...	...
All Castes. Females	...	1,230	...	731	...	718	...	371	...	558	...	257	...	751	...	1,739	...	1	...	17,625	...
All Castes. Persons	3,070		2,032		1,979		1,163		1,596		742		1,723		3,449		11		.....		38,954

TABLE showing by Race the Rate of Mortality per 1,000 of Population from different Death Causes in 1912.

Race or Caste.	Small-pox.	Measles.	Plague.	All Fevers.	Scarlet.	Enteric.	Malaria.	Ague and Remit-tent.	Relaps-ing.	Cholera.	Diar-rhœa.	Dysen-tery.	Phthisis.	Other Respira-tory Diseases.	Acci-dents.	All Other Causes.	All Causes.
Jains	·68	·19	5·91	6·69	.....	·29	·68	5·71	.....	·82	4·83	2·15	2·73	19·45	1·07	24·34	69·11
Brahmins	·59	·03	1·36	2·71	.....	·16	·24	2·29	.....	·80	1·75	·98	1·43	6·72	·29	9·22	25·92
Lingaits	1·69	.....	5·08	12·72	.....	.....	·84	11·87	.....	·84	5·08	6·78	7·63	31·38	·84	44·95	117·04
Bhatias	·12	.....	·64	3·59	.....	·12	·51	2·95	.....	·38	3·98	·38	3·85	7·58	·64	13·36	34·57
Hindus of other Castes	1·06	·16	1·84	3·25	.....	·08	·27	2·89	.....	1·69	2·37	1·40	1·72	8·64	·59	10·70	33 47
Hindus, Low Caste...	2·59	1·69	2·41	8·14	.....	.....	·49	7·65	.....	2·26	10·52	4·60	4·42	24·89	·97	25·50	88·06
Hindus, All Castes...	*1·12*	*·27*	*1 96*	*3·72*	.....	*·09*	*·30*	*3·32*	.....	*1·63*	*3·06*	*1·64*	*1·98*	*10·13*	*·62*	*12·25*	*38·43*
Mussalmans	·63	·07	1·51	3·95	.....	·07	·46	3·41	.....	2·87	3·02	2·18	3·99	12·42	·89	19·70	50·72
Parsees	·11	·01	·66	2·39	.....	·62	·51	1·25	.....	·70	2·49	·84	·62	2·35	·51	14·05	25·79
Jews	·30	·15	·75	2·57	.....	·60	·30	1·51	·15	3·33	2·88	2·57	·90	8·94	·30	15·76	38 50
Native Christians	1·81	·04	1·40	3·05	.....	·46	·33	2·25	.....	2·08	4·16	1·30	1·57	6·35	·77	13·16	38·37
Eurasians	·47	.....	·23	3·58	.....	·71	1·67	1·19	.....	·47	2·38	1·43	·71	4·29	·71	13·37	27·69
Europeans	·84	·08	·25	3·78	·08	1·51	1·51	·67	.....	·75	1·34	1·59	... ...	1·68	1·51	9·58	21·43
Buddhists	.....	1·73	.....	1·73	.....	.....	1·73	.....	.....	.....	1·73	.....	.....	1·73	1·73	8·65	17·30
Other and Unknown Castes	.....	.....	.....	7·35	.....	.....	7·35	.....	.....	.....	.....	.....	.....	22·05	88·23	14·70	132·35
Total ...	·99	·21	1·75	3·66	.....	·15	·36	3·13	.....	1·82	3·04	1·58	2·22	9·88	·69	13·86	39·77

TABLE of BIRTHS in different months by Caste and Sex in 1912.

MONTHS.	Jains.		Brahmins.		Lingaits.		Bhatias.		Hindus of other castes.		Hindus, Low caste.		Mussalmans.		Parsees.		Jews.		Native Christians.		Eurasians.		Europeans.		Negro-Africans.		Buddhists.		Other and unknown castes.		TOTAL.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
January	24	20	25	32	1	1	6	3	516	498	150	158	260	168	68	62	18	14	31	49	3	4	7	10	...	...	...	...	1	2	1,050	1,021	2,071
February	21	19	21	24	...	2	2	8	441	419	126	113	201	186	55	49	12	9	33	33	4	3	4	8	...	...	...	...	...	...	920	873	1,793
March	12	12	25	16	3	3	15	4	431	412	165	129	186	165	52	48	14	9	52	38	3	3	12	5	...	...	...	...	2	...	972	839	1,811
April	4	2	27	22	2	...	7	7	369	369	166	144	173	159	52	38	4	4	33	42	2	2	9	6	...	...	...	...	...	...	848	795	1,643
May	12	8	27	21	2	1	2	6	396	351	147	141	170	169	52	34	9	13	38	39	5	5	12	10	...	1	...	...	2	1	869	800	1,669
June	7	5	25	18	1	2	5	7	405	326	125	116	152	135	64	41	8	13	30	35	1	6	12	13	...	...	...	...	...	...	835	717	1,552
July	10	10	21	22	3	3	2	2	396	371	151	128	159	164	60	63	5	9	34	44	1	3	9	9	2	...	...	...	...	3	853	831	1,684
August	5	5	22	28	...	1	5	3	448	404	134	130	169	179	49	47	9	4	49	47	4	2	10	2	1	...	...	...	...	2	900	854	1,754
September ...	7	14	12	19	2	...	3	1	432	379	118	133	181	161	65	65	7	4	56	41	4	9	17	13	...	...	..	...	...	...	907	839	1,746
October	9	13	24	23	4	3	6	3	466	439	131	129	183	157	61	64	7	12	53	50	3	3	12	9	...	1	...	...	...	...	959	905	1,864
November	14	16	21	20	1	2	9	6	451	477	140	148	184	174	73	60	10	11	38	43	5	6	12	8	1	...	...	1	...	...	959	972	1,931
December	17	13	18	29	3	1	10	3	476	500	147	137	188	185	78	58	13	7	43	47	3	1	1	13	...	...	...	...	1	...	1,001	999	2,000
Total ... Males ...	142	...	268	...	22	...	72	...	5,222	...	1,700	...	2,149	..	729	...	116	...	485	...	38	...	120	...	4	...	...	...	6	...	11,073	...	...
Total ... Females.	...	136	...	274	...	19	...	53	...	4,945	...	1,606	...	2,002	...	624	...	109	...	508	...	47	...	106	...	2	.	1	...	8	...	10,445	...
Total ... Persons.	278		542		41		130		10,167		3,306		4,151		1,353		225		993		85		226		6		1		14		.....		21,518

TABLE showing the number of Still-births by Race and Month in 1912.

MONTHS	MALES.															FEMALES.															PERSONS.															
	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other Castes, and Unknown	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other and Unknown Castes.	Total.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of other Castes.	Hindus, Low Caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Other and Unknown Castes.	Total.
January.. ..	5	9	1	..	45	15	13	3	1	4	..	..	..	..	2	98	..	..	1	1	34	10	11	2	..	2	1	..	..	..	1	63	5	9	2	1	79	25	24	5	1	6	1	..	..	..	3	161
February ..	4	7	..	1	38	14	16	5	1	3	..	..	..	..	1	88	2	1	..	..	21	6	10	4	..	2	..	..	..	..	3	49	6	8	..	1	57	20	26	9	1	5	..	..	..	..	4	137
March	3	3	..	..	28	11	20	3	1	4	..	..	..	..	1	74	3	1	1	1	25	11	10	2	..	2	..	1	..	..	..	56	5	4	1	1	53	22	30	5	1	6	..	1	..	..	1	130
April	..	1	..	1	40	17	13	4	..	5	..	..	1	..	..	85	..	1	..	..	19	5	12	3	..	3	..	1	..	..	..	44	..	2	..	1	59	22	28	7	..	8	..	1	1	..	..	129
May	1	2	..	1	20	8	16	5	..	5	..	..	..	..	1	59	..	3	..	..	21	12	18	4	..	3	..	..	..	1	..	62	1	5	..	1	41	20	34	9	..	8	..	..	..	1	1	121
June	..	2	1	1	30	9	12	..	1	2	..	..	..	..	..	58	..	..	..	..	19	7	14	4	..	3	..	..	..	..	1	48	..	2	1	1	49	16	26	4	1	5	..	..	..	..	1	106
July	2	1	1	1	42	12	15	3	1	2	..	..	..	..	2	82	..	..	..	..	18	10	20	1	1	1	..	..	..	..	3	54	2	1	1	1	60	22	35	4	2	3	..	..	..	..	5	136
August	2	4	..	1	38	13	19	5	2	1	1	..	..	..	1	89	1	2	1	..	34	9	12	3	2	2	..	1	..	..	2	69	3	6	1	1	72	24	31	8	4	3	1	1	..	..	3	158
September ..	1	6	..	3	33	9	18	4	..	5	..	..	..	..	4	83	1	5	..	..	30	5	18	3	2	2	..	..	..	..	2	68	2	11	..	3	63	14	36	7	2	7	..	..	..	..	6	151
October	2	2	1	1	47	22	20	6	2	5	1	..	1	..	2	112	1	1	..	1	31	13	11	1	..	2	..	..	..	..	1	62	3	3	1	2	78	35	31	7	2	7	1	..	1	..	3	174
November ..	4	5	..	..	27	15	17	4	3	2	1	1	..	..	1	80	..	3	..	..	28	11	13	3	2	4	..	..	..	..	2	66	4	8	..	..	55	26	30	7	5	6	1	1	..	..	3	146
December ..	1	3	1	1	27	10	10	4	..	2	..	..	..	..	2	61	2	..	1	..	15	10	18	4	2	4	1	1	..	..	..	58	3	3	2	1	42	20	28	8	2	6	1	1	..	..	2	119
Total ..	25	45	5	11	413	157	192	46	12	40	3	1	2	..	17	969	9	17	4	3	295	109	167	34	9	30	2	4	..	1	16	699	34	62	9	14	708	266	359	80	21	70	5	5	2	1	32	1,668

TABLE showing the number of Still-births by Section and Month in 1912.

MONTHS.	A					B				C						D					E							F			G		Harbour Docks, Railways and Homeless.	TOTAL.
	Upper Colaba.	Middle and Lower Colaba.	Fort South.	Fort North.	Esplanade.	Mandvi.	Chakla.	Umarkhadi.	Dongri.	Market.	Dhobi Talao.	Fanaswadi.	Bhuleshwar.	Khara Talao.	Kumbharwada.	Khetwadi.	Girgaum.	Chowpati.	Walkeshwar.	Mahalakshmi.	Mazagon.	Tarwadi.	2nd Nagpada.	Kamathipura.	Tardeo.	Byculla.	1st Nagpada.	Parel.	Sewri.	Sion.	Mahim.	Worli.		
January ..	1	1	..	4	2	7	6	6	1	5	8	5	7	3	4	2	5	1	..	7	11	9	3	6	2	16	..	7	4	6	9	13	..	161
February ..	..	4	1	1	2	4	4	8	3	4	7	2	..	2	7	6	5	1	1	2	4	5	3	5	4	15	1	7	1	3	8	17	..	137
March ..	1	4	..	5	1	1	6	7	6	6	6	6	4	3	2	..	2	1	..	1	5	4	2	9	2	9	1	7	6	4	7	12	..	130
April ..	2	3	..	6	7	5	3	8	3	1	5	1	2	5	4	..	6	3	..	2	9	2	2	8	5	9	..	7	3	4	3	14	..	129
May	..	2	..	4	2	5	3	9	3	4	5	3	2	3	5	3	1	1	..	3	5	7	8	4	5	7	1	9	3	3	3	10	..	121
June	..	1	..	2	..	7	2	7	3	2	2	3	3	4	2	4	5	..	..	3	5	3	4	4	5	11	..	4	3	4	3	10	..	106
July	1	3	..	6	..	..	4	9	3	2	6	..	3	7	5	..	2	1	1	6	7	3	3	6	7	10	1	7	1	4	9	13	..	136
August ..	..	1	1	4	..	2	..	10	6	2	5	5	5	10	6	6	9	1	3	2	8	5	6	8	3	16	2	6	3	5	4	11	..	138
September ..	1	..	..	3	2	6	5	13	4	3	5	3	5	4	6		4	2	1	5	6	3	5	6	3	9	..	11	5	5	4	9	...	151
October ..	1	..	..	3	..	3	3	8	3	1	13	3	4	6	2	4	3	1	..	5	3	5	6	10	6	12	2	6	4	7	5	29	..	174
November ..	..	2	..	1	..	3	4	15	3	3	3	3	7	1	3	2		1	..	2	7	6	3	3	5	18	2	5	7	3	4	12	..	148
December ..	..	3	..	4	4	1	..	11	1	3	5	1	5	7	2	3	3	1	5	3	8	6	4	4	5	7	2	1	2	4	5	9	..	119
Total ..	7	24	2	43	20	50	40	111	43	41	73	39	47	65	48	33	54	14	11	41	78	58	55	78	52	139	12	77	41	55	64	158	..	1,668

STATEMENT showing the number of DEATHS from Principal Causes in different Hospitals in the City of Bombay in 1912.

HOSPITALS.	GENERAL DISEASES.																								LOCAL DISEASES.																Injuries.		Unspecified Causes.		TOTAL.		
	Still-birth.		Small-pox.		Measles.		Plague.		Fevers.		Cholera.		Diarrhœa and Dysentery.		Puerperal Septicæmia.		Leprosy.		Premature Birth.		Other General Diseases.		Nervous System.		Circulatory System.		Phthisis.		Other Diseases of the Respiratory System.		Digestive System.		Urinary System.		Generative System.		Other Local Diseases.									
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
Adams Wylie Memorial Hospital.	..	..	..	..	..	..	..	..	..	..	..	..	18	4	..	1	..	..	..	..	30	2	1	..	3	2	29	7	27	..	5	..	3	..	..	..	2	..	..	..	..	..	118	16	134
Albless Cama Hospital ..	65	37	1	..	..	..	..	1	2	2	..	..	3	23	..	8	..	..	24	21	11	31	6	6	1	12	..	13	3	12	1	12	..	7	2	12	..	1	..	2	..	..	54	163	217
Arthur Road Hospital ..	2	1	119	48	1	..	..	..	11	1	183	55	25	1	..	..	..	..	..	..	11	9	2	1	..	..	6	4	20	..	1	2	1	..	..	..	..	..	..	..	..	..	380	121	501
Ayurvedic Hospital ..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	4	..	1	..	1	..	1	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	10	3	13
Bai Motlabai and Sir D. M. Petit Hospital ..	83	75	..	..	..	..	1	3	2	..	..	31	33	..	13	..	..	26	20	9	22	6	9	..	5	..	5	10	20	10	15	3	4	..	3	..	1	2	11	..	..	100	164	264
Bai Rukshamani Lying-in Hospital	3	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6
Dr. Bhalekar's Hospital ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	3	1	4
Colaba Lunatic Asylum ..	..	..	..	..	..	..	..	..	..	3	2	..	4	..	..	..	..	..	..	..	2	2	..	..	3	..	3	..	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..	16	7	23
Colaba Station Hospital ..	1	1	..	..	..	..	..	..	3	1	..	..	3	3	..	..	..	..	3	..	2	2	1	1	1	1	..	2	5	4	5	..	1	..	..	..	..	..	2	..	..	..	28	14	40
Goculdas Tejpal Hospital..	..	..	..	..	..	..	2	..	27	3	1	1	91	11	..	..	..	..	3	..	83	2	8	2	11	2	78	15	95	13	15	1	24	7	1	..	3	..	51	7	..	..	440	63	503
Sir J. J. Hospital	2	..	..	..	..	..	1	..	59	11	1	..	170	45	..	..	..	..	..	..	117	72	38	18	26	12	119	60	217	30	30	17	26	10	6	1	42	9	37	30	..	..	939	310	1,249
Dr. Kerrawalla's Hospital	3	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	7
Matunga Leper Asylum ..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	59	20	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	80	22	82
Maratha Hospital	2	..	1	..	..	..	150	25	..	..	..	..	1	..	..	..	..	..	2	..	2	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	156	26	182
Dr. Masina's Hospital ..	11	7	..	..	..	..	..	..	3	6	..	..	1	..	..	..	..	..	4	5	9	14	3	..	2	2	..	..	4	1	12	3	1	1	2	4	2	..	1	..	..	..	44	36	80
Dr. Parakh's Hospital ..	5	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	3	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	4	6	10
Parsee Fever Hospital ..	..	..	..	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	6
Parsee Lying-in-Hospital..	16	9	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	..	6	6	2	1	..	2	..	1	..	1	4	3	2	2	..	..	1	2	..	..	..	..	..	..	19	20	39
Police Hospital	..	..	..	..	..	..	..	..	1	..	1	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..	21	..	21
St. John's Hospital ..	4	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3
St. Joseph's Foundling Home	..	..	..	..	..	..	..	..	10	11	1	..	12	11	..	..	..	..	..	..	18	22	7	12	..	..	..	2	3	7	2	5	..	..	..	..	4	2	..	..	..	..	51	72	123
St. George's Hospital ..	3	2	6	..	1	..	1	..	20	9	1	1	1	9	..	..	..	..	2	..	12	10	6	1	3	1	..	5	13	4	12	10	3	1	..	1	1	..	4	1	..	..	101	53	154
Seva-Sadan Hospital ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	2	4
Parsee General Hospital...	1	..	..	..	..	..	..	..	3	..	..	..	1	1	..	..	..	..	..	..	7	6	2	2	1	1	..	..	5	1	5	3	1	..	..	..	..	..	..	..	..	..	25	14	39
96th Berar Infantry Hospital	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6
2nd Rajput Light Infantry Hospital	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
TOTAL.. Males ..	201	..	127	..	2	..	156	..	145	..	190	..	..	..	..	..	59	..	73	..	274	..	83	—	57	..	236	..	429	..	152	..	62	..	12	..	55	..	97	..	..	..	2,584	..	..
TOTAL.. Females ..	..	147	..	48	..	..	..	31	..	49	..	57	..	143	..	22	..	20	..	54	..	205	..	50	..	40	..	120	..	97	..	71	..	33	..	24	..	18	..	51	..	..	..	1,128	..
TOTAL.. Persons ..	348		175		2		187		194		247		518		22		79		127		479		133		97		356		526		223		95		36		68		148		..		..		3,712

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TABLE showing the Number of Plague Deaths by Streets and Races during 1912.

Ward.	Section.	Locality. Street.	Census Population by Census of 1911.	Races. Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total.
		Upper Colaba.																	
A	Upper Colaba.	Pilot Bunder Road	1,557	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	3
		Middle and Lower Colaba.																	
	Middle and Lower Colaba.	Arthur Bunder Road... ...	19,679	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Bohra Street		...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
		Bohra Cross Lane ...		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Colaba Causeway ...		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Colaba Road		...	...	...	...	5	...	...	1	...	...	...	...	...	...	...	6
		Gun Carriage Street ...		...	...	...	...	6	...	1	...	...	...	...	...	...	...	...	7
		Hamal Lane		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Hormusji Street ...		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
A		Koli Lane, 1st ...		...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	4
		Koli Lane, 2nd... ...		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Koli Lane, 4th... ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Manekji Street ...		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Middle Colaba Road ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Nowroji Street ...		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Nowroji Furdoonji Road ...		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Thomas Road... ...		...	...	...	...	5	3	2	...	...	...	...	...	...	...	...	10
		Victoria Bunder Road ...		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Wodehouse Road		...	...	...	...	3	...	...	...	...	...	...	1	...	...	...	3
		Fort, South.																	
	Fort, South.	Apollo Street...	3,403	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
A		Dalal Street		...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	2
		Forbes Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Fort, North.																	
	Fort, North.	Bazar Gate Street	25,400	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Barrack Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Bohra Bazar Street		...	1	...	...	7	...	...	2	...	...	...	...	...	...	...	10
		Bomanji Lane		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Cawasji Patel Street		...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	3
		Channa Street		...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	3
		Cochin Street		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Frere Road		4	...	...	...	2	...	1	1	...	1	...	...	...	...	...	9
A		Futter Bunder		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		King Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		Maruty Street		...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	3
		Mint Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mint Cross Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mangesh Senoi Street... ...		...	...	...	1	2	...	...	2	...	...	...	...	...	...	...	3
		Mody Street		...	...	...	...	5	...	...	2	...	...	...	...	...	...	...	7
		Parsi Bazar Street		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Parsi Panchayat Lane ...		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Esplanade.																	
	Esplanade.	Carnac Road	17,761	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3
		Frere Road		...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	1
A		G. T. Hospital		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Hornby Road		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Hospital Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Paltan Road		...	...	...	...	1	2	...	...	...	...	...	1	...	...	...	3
		St. George's Hospital ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Ward.	Section.	STREET.	Population by Census of 1911.	RACES. Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total.
		Mandvi.																	
	Mandvi.	Argyle Road	33,902	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	3
		Argyle Cross Lane		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Bhandari Street		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Bhandari Cross Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Bhandup Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Broach Street		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Chukla Cross Lane		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Chinch Bandar Road		1	...	...	...	3	2	...	...	...	...	...	...	...	...	...	6
		Chinch Bandar Cross Lane		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Clive 2nd Cross Lane		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Daryastan Street		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		De'Souza Street		...	2	...	...	...	3	...	...	...	...	...	...	...	...	...	5
		De'Souza 1st Cross Lane		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Dongree Street		1	1	...	1	...	4	1	...	...	...	...	...	...	...	...	8
B		Dontad Cross Lane		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Frere Road		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Isajee Street		...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	2
		Jambli Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Jambli Cross Lane, 2nd		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Janjikar Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Khadak Street		...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Kazi Syed Street		...	2	...	...	...	2	1	...	...	...	...	...	...	...	...	5
		Kurla Street		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Masjid Bandar Road		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Masjid Siding Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Musjid Station Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Old Bengalpura Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Pydhoni Road		...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2
		Samuel Street, 1st		...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2
		Sayed Mukri Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Chukla.																	
	Chukla.	Abdul Rehman Street	24,231	...	...	...	...	5	2	...	...	...	...	...	...	...	...	...	7
		Bhajee Pala Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Bhajipala Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Chukla Street		1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Dhobi Street		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	3
		Hussainkhan Khalipa Street		...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3
B		Jakeria Masjid Road		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Kambekar Street		...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		Masjid Bandar Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Memonwada Road		...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2
		Nagdevi Street		...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	6
		Nagdevi Cross Lane		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Narayen Dhuru Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Sarang Street		...	...	...	...	1	1	5	...	...	...	...	...	...	...	...	7
		Tawa Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Umarkhadi.																	
	Umarkhadi.	B. B. Parel Road	45,679	1	...	...	2	3	3	1	...	...	...	...	...	...	...	...	10
		Babula Tank Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Choona Bhatti Attar Gally		...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3
		Dongree Road		...	...	...	1	...	...	6	...	...	...	...	...	...	...	...	7
		Imamwada I. T. Chawl		...	...	...	...	3	2	7	...	...	...	...	...	...	...	...	12
		Imamwada Road		...	...	...	...	1	3	2	...	...	...	...	...	...	...	...	6
		Jail Road, East		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Jail Road, North		...	...	...	...	1	...	3	...	...	...	...	...	...	...	...	4
		Jail Road, South		...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
		Jakeria Musjid Street		...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3
B		Kambeker Street		...	...	...	...	...	1	10	...	...	...	...	...	...	...	...	11
		Memonwada Road		...	...	...	...	1	1	9	...	...	...	...	...	...	...	...	11
		Nishanpada Road		...	...	...	1	2	2	11	...	...	...	...	...	...	...	...	16
		New Bengalpura		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Nagdevi Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Old Nagpada		...	...	...	...	1	1	7	...	...	...	...	...	...	...	...	9
		Pathan Wadi		...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		Samuel Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Tantanpura		...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	5
		Umarkhadi Road		...	...	...	...	1	2	2	...	...	...	...	...	...	...	...	5
		1st Chinch Bunder Road		...	...	...	...	8	7	5	...	...	...	...	...	...	...	...	20
		Tandel Street		...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	4
				...	...	...	...	...	...	9	...	...	...	...	...	...	...	...	9

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Ward.	Section.	STREET.	Population by Census of 1911.	RACES. Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total.
		Dongri.																	
B	Dongri.	Argyle Road	27,246	...	1	...	1	...	2	...	...	1	...	...	...	...	...	...	5
		Chinch Bunder Road		...	1	...	...	3	2	1	...	...	...	...	...	...	...	...	7
		Dongri Road		...	...	...	1	4	...	...	...	...	...	...	...	...	...	...	5
		Frere Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Jail Road, East		...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	4
		Chinch Bunder Valpakhady		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		1st Nowrojee Hill, North		...	...	...	...	11	5	...	...	...	...	...	...	...	...	...	16
		1st Nowrojee Hill, South		...	...	...	...	6	2	...	...	...	...	...	...	...	...	...	8
		1st Nowrojee Hill, North × Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		1st Nowrojee Hill, Palm		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		2nd Nowrojee Hill, North		...	...	...	...	3	4	...	...	...	...	...	...	...	...	...	7
		Princes Road		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Mahalaxmi P. T. Cd.		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Valpakhady		...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	3
		Market.																	
	Market.	Abdul Rehiman Street	30,172	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2
		Carnac Road		...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Dhunjee Street		2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	3
		Kalbadevi Road		2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	4
		Lohar Chawl Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Musjid Bander Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mumbadevi Road		...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		New Hanuman Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
C		Old Hanuman Lane		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Old Hanuman 1st Cross Lane		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Owal Wadi		...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
		Shamshet Street		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Shaik Memon Street		1	...	...	...	5	...	...	...	...	...	...	...	...	...	...	6
		Sutar Chawl		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Tak Wadi		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Tel Wadi		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Vithalwadi		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Dhobi Talao.																	
	Dhobi Talao.	Cavel Street	38,684	...	3	...	...	5	...	...	...	...	3	...	...	...	...	...	11
		Chandanwady		...	...	...	...	9	1	...	...	...	1	...	...	...	...	...	11
		Dadysett Agiary Street		...	1	...	1	1	...	...	1	...	...	...	...	...	...	...	4
		Girgaum Road		...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	3
		Kalbadevi Road		...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Kolbhat Street		...	1	...	...	3	...	...	...	...	...	...	...	...	...	...	4
		Kolbhatwady		...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
C		Lohar Street		...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2
		Marine Lines, 1st Lane		...	...	...	...	1	1	...	...	...	2	...	...	...	...	...	4
		Marine Lines, 2nd Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Marine Lines, 4th Lane		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Princess Street		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Ropa Lane		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Santook Lane		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Sonapur Lane		...	...	...	...	...	3	3	1	...	1	...	...	...	...	...	8
		Trinity Street		...	...	...	...	7	...	1	...	...	...	...	...	...	...	...	8
		Fanaswady.																	
	Fanaswady.	Bhasker Lane	27,403	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Bhuleshwar Road		...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Burrows Lane		...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2
		Cathedral Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Dadysett Agiary Street		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Dukarwady		...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	3
C		Fanaswady		...	4	...	...	11	...	...	...	...	...	...	...	...	...	...	15
		Fanaswady 2nd Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Girgaum Road		...	...	...	...	7	...	1	...	...	...	...	...	...	...	...	8
		Kumbhartookda		...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		Sonapur Lane		...	...	...	...	...	2	4	...	...	1	...	...	...	...	...	7
		Tadwady		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Thakurdwar Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Zaoba's Wady		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Locality.				Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Musalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Bhuleshwar.																	
C	Bhuleshwar.	Alli Umar Street	36,459	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		Banian Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Bapoo Khote Street		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Bhendi Bazar Parel Road ...		...	...	...	...	6	...	3	...	...	...	...	...	...	...	...	9
		Bhuleshwar Road		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Bohra Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Bhoiwada 1st Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Do. 2nd Lane		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Do. 3rd Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Cawasji Patel Tank Road ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Ghogari Street		...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	4
		Girgaum Back Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Hargowindesai's Kandoi ...		...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Kalbadevi Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kazi Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Kika Street		...	5	...	...	3	...	...	...	...	...	...	...	...	...	...	8
		Maruty Lane		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		Musjid Street		...	...	...	...	7	...	1	...	...	...	...	...	...	...	...	8
		Nizam Street		...	...	...	...	2	...	2	...	...	...	...	...	...	...	...	4
		Panchayet Wadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Pinjrapole Lane		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Do. 1st Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Do. 3rd Lane		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Pophalwady, 1st Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Do. 2nd Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Do. 3rd Lane ...		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Khara Talao.																	
C	Khara Talao.	Bapty Road	22,979	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Chimna Butcher Street ...		...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	6
		Doctor Street		...	...	...	...	1	...	8	...	...	...	...	...	...	...	...	9
		Dhabu Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Duncan Road		...	...	...	...	5	...	1	...	...	...	...	...	...	...	...	6
		Dharamsey Street		...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	3
		Erskine Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Gujar Street		...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	5
		Khoja Street		...	2	...	...	4	...	1	...	...	...	...	...	...	...	...	7
		Kassi Moholla (Chimna Butcher Street.)		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Khara Talao Street		...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	3
		Khoja Cross Lane		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mutton Street		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Null Bazar		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Parel Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Pakmodia Street		...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		Sandhurst Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Yacob Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Kumbharwada.																	
C	Kumbharwada.	Ardeshir Dady Street	27,703	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		Ardeshir Dady Cross Lane ...		...	...	...	...	1	...	...	4	...	...	...	...	...	...	...	5
		Bhandari Street		...	...	1	...	4	1	...	...	...	...	...	...	...	...	...	6
		C. P. Tank Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	2
		2nd Carpenter Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Duncan Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		2nd Duncan Cross Lane ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Durgadevi Street		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Falkland Road		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Grant Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Islampura Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Kumbharwada Street		...	...	...	...	8	1	...	...	...	...	...	...	...	...	...	9
		Northbrook Street		...	...	...	...	5	2	...	...	...	...	...	...	...	...	...	7
		2nd Pathan Street		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Locality.			Census	Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total.
		Khetwadi.																	
D	Khetwadi.	Charni Road	31,937					2	1										3
		Chunam Kiln Road								1									1
		Falkland Road						2											2
		Do. 2nd Lane						1											1
		Do. 3rd Lane						1	4										5
		Do. 4th Lane						3											3
		Do. 6th Lane						2											2
		Girgaum Back Road		1				3			1								5
		Grant Road						1											1
		Khambata Lane						1	3		1								5
		Khetwadi Main Road						2	1	1									4
		Do. 6th Lane						1	2										3
		Do. 3rd Lane							1										1
		1st Parsiwada									1								1
		2nd Parsiwada							2										2
		3rd Parsiwada						1											1
		Procter Road						1											1
		Sandhurst Road						3											3
		Girgaum.																	
D	Girgaum.	Ambe Wadi	30,779					1											1
		Charni Road			1														1
		Cow Lane			1														1
		Girgaum Road			1			7	6										14
		Girgaum Back Road					1		2										3
		Kandewadi Lane			3		1	1											5
		Kandewadi Cross Lane						1											1
		Kele Wadi Lane			1														1
		Khatar Lane			2			4											6
		Khotachi Wadi						1	1										2
		Mangal Wadi						1	1	1									3
		Mugbhat Street						2	1	2									5
		Mugbhat Cross Lane						3	2										5
		Nickdavdi Lane											1						1
		Pimpal Wadi Lane			2			1											3
		Sadashiv Street							1										1
		Thakurdwar Road					1												1
		Chowpati.																	
D	Chowpati.	1st Bhatwadi Lane	11,397					1											1
		2nd Bhatwadi Lane						1											1
		Chowpati Road							1	1	1								3
		Dammer Lane		1				1											2
		Girgaum Road						1	1										2
		Girgaum Back Road											1						1
		Paper Mill Lane																	1
		Sandhurst Road			1														1
		Walkeshwar.																	
E	Walkeshwar.	Hughes Road	10,640					1											1
		Little Gibbs Road						2	1										3
		Narayan Dabholkar Road							1										1
		Ridge Road							1										1
		Walkeshwar Road			1														1

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Locality.				Races.															
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro Africans.	Buddhists.	Unknown.	Total.
		Mahalakshmi.																	
D	Mahalakshmi.	Ansley Road	26,302	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Arthur Road		...	...	...	...	11	20	...	...	...	...	...	...	...	...	...	31
		Chikal Wadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Falkland Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Forjett Street		...	...	...	...	2	...	1	1	...	...	...	...	...	...	...	4
		Gowalia Tank Road		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Sleater Road		...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3
		Tardeo Road		...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
		Mazagon.																	
E	Mazagon.	Belvedere Road	80,075	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
		Church Street		...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
		1st Carpenter Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	12
		2nd Do. do.		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		DeLima Street		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Gunpowder Road		1	...	...	...	2	...	3	...	...	...	...	...	...	...	...	6
		Ghorupdeo Road		1	...	...	...	5	...	...	...	...	1	...	...	...	...	...	7
		Mazagon Road		2	...	...	...	5	...	1	...	...	...	...	...	...	...	...	8
		Mbatarpakhadi		...	...	...	...	14	2	2	...	...	...	...	...	...	...	...	18
		Mount Road		...	...	...	...	6	...	2	...	...	...	...	...	...	...	...	8
		Nuzaverpakhadi		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Reay Road		...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
		Victoria Road		...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3
		Tarwadi.																	
E	Tarwadi.	Babula Tank Road	28,424	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Connaught Road		1	...	...	...	1	...	1	...	...	...	...	...	...	...	...	3
		Ghorupdeo Road		...	...	...	...	18	1	...	...	...	1	...	...	...	...	...	20
		Love Lane		...	...	...	...	2	...	1	...	...	1	...	...	...	...	...	4
		Love Lane Cross Gulli		1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	3
		Mazagon Road		...	...	...	...	4	2	2	...	...	2	...	...	...	...	...	10
		Mount Road		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Nesbit Lane		...	...	...	...	7	3	...	...	...	...	...	...	...	...	...	10
		Parel Road		...	...	...	...	9	...	1	...	...	...	...	...	...	...	...	10
		Sussex Road		...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
		Victoria Road		...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	6
		2nd Nagpada.																	
E	2nd Nagpada.	Bellasis Road	21,700	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Duncan Road		...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2
		Kazipura Street		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Khandia Street		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Mastan Tank Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Parel Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Sk. Buddan K. Street		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Tank Street		...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	3
		Undria Street		...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
		Kamathipura.																	
E	Kamathipura.	1st Lane	86,761	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		2nd do.		...	...	1	...	4	...	...	...	...	...	...	...	...	...	...	5
		3rd do.		...	...	...	...	6	...	1	...	...	...	...	...	...	...	...	7
		5th do.		...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		7th do.		...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
		8th do.		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		9th do.		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		12th do.		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		13th do.		...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	3
		14th do.		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		15th do.		...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
		Bapty Road		...	...	...	...	2	3	1	...	...	...	...	...	...	...	...	6
		Bazar Road		...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Duncan Road		...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3
		Grant Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Stable Street		...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
		Road Side		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1

35—*continued.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*continued.*

Locality.				Population by Census of 1911.	Races.															
Ward.	Section.	Street.			Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Hindus, Low Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Tardeo.																		
E	Tardeo.	Balaram Street		27,758	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Bapty Road			...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Bellasis Road			...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Falkland Road			...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Foras Road			...	...	...	...	2	3	1	...	...	...	...	...	...	...	...	6
		Gilder Street			...	...	...	...	8	1	2	...	...	...	...	...	...	...	...	11
		Grant Road			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Jairajbhai Street			...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	3
		Suklajee Street			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Byculla.																		
	Byculla.	Agripada		75,348	1	...	...	...	18	3	8	...	...	...	...	...	...	...	...	25
		Arthur Road			...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Chambhar Lane			...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Clare Road			...	...	...	...	...	1	...	...	...	1	...	1	...	...	...	3
		Clerk Road			...	...	...	...	5	1	...	...	1	...	...	...	...	...	...	7
		DeLisle Road			1	...	...	...	10	1	...	...	...	...	...	...	...	...	...	12
		„ Cross Lane			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Ghelabhoy Street			...	...	...	...	...	1	4	...	...	...	...	...	...	...	...	5
		Gilder Street			...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	6
		Gujree Bazaar			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
E		Haines Road			...	...	...	...	18	4	2	...	...	...	...	...	...	...	...	24
		„ Sunder Lane			...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		„ Tank Pakhady			...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	2
		Kalachowki Road			...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		„ Cross Lane			...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Kalayani			...	...	...	...	...	1	4	...	...	...	...	...	...	...	...	5
		Mahomedan Street			...	...	...	...	2	3	7	...	...	...	...	...	...	...	...	12
		Morland Road			...	...	...	...	3	9	...	...	...	2	...	...	...	...	...	14
		Ripon Road			2	...	...	...	11	...	7	...	...	2	1	...	...	...	...	23
		Parel Road			...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		Sankli Street			...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	2
		1st Nagpada.																		
E	1st Nagpada.	Bellasis Road		6,414	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		New Nagpada Road			...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
		3rd Peerkhan Lane			...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Parel.																		
	Parel.	Arthur Road		45,474	2	...	...	...	16	...	2	...	...	...	...	...	...	...	...	20
		Bholwadi Road			...	3	...	...	1	...	...	...	...	...	...	...	...	...	...	4
		Currey Road			...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Elphinstone Road			...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Government Gate Road			...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
		„ House Compound.			...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
F		Kalachowky Road			...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Lalwady			...	...	...	...	6	2	1	...	...	...	...	...	...	...	...	9
		Parel Village			...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	8
		Parel Back Road			...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Parel Road			...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		Parel Tank Road			...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Parel Cross Lane			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Peru's Chawl			...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Saparibaug Road			...	2	...	...	11	5	1	1	...	...	...	...	...	...	...	20
		Tulsiram Pada			...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
		Sewri.																		
F	Sewri.	Bhoiwadi Road		19,067	...	...	...	...	4	...	...	...	...	2	...	...	...	...	...	6
		Gulanji Hill Road			...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
		Parel Tank Road			...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Sewri Cemetery Road			...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
		Sewri Cross Road			...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Sewri Road			...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Sewri Koliwada			...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3

35—*concluded.*

TABLE showing the Number of Plague Deaths by Streets and Races during 1912—*concluded.*

Locality.				Races.														
Ward.	Section.	Street.	Population by Census of 1911.	Jains.	Brahmins.	Lingaits.	Bhatias.	Hindus of Other Castes.	Low Hindus, Caste.	Mussalmans.	Parsees.	Jews.	Native Christians.	Eurasians.	Europeans.	Negro-Africans.	Buddhists.	Unknown.	Total.
		Sion.																	
F	Sion.	Bhoiwadi Road...	30,680	...	...	...	...	6	1	...	...	...	...	...	...	...	...	...	7
		Bhoiwadi Cross Road		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Dadar Road		...	1	...	...	3	2	...	...	...	...	...	...	...	...	...	6
		Dhakti Sewri		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Elphinstone Road		1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
		Khada Matunga		1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
		Matunga Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Matunga Bhandarwada ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Naigaum Road		...	...	...	...	4	...	...	2	...	...	...	...	...	...	...	6
		Naigaum Cross Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		Vincent Road		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Mahim.																	
G	Mahim.	Mahim Bazar Road	80,492	...	...	...	...	16	...	4	...	...	...	...	...	...	...	...	20
		Mahim Causeway		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Custom Road		...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	2
		Dharavi Road		...	...	...	...	2	9	1	...	...	...	...	...	...	...	...	12
		Durga Street		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Kapad Bazar Road		...	3	...	...	9	...	2	...	...	...	...	...	...	...	...	14
		Lohar Chawl		...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
		Lady Jamshedjee Road ...		...	...	...	...	13	...	...	2	...	5	...	...	...	...	...	20
		Matunga Road		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Mori Road		...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
		Old Parbhadevi Road		...	...	...	...	4	...	1	...	...	1	...	...	...	...	...	6
		Pasha Cumbhar Gully... ...		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Worli.																	
G	Worli.	Clerk Road	89,611	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
		Currey Road		...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
		Dadar Kumbharwada... ...		...	...	...	...	12	...	...	...	...	1	...	...	...	...	...	13
		Dadar Gully		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Dadar Road		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
		DeLisle Road		...	...	...	...	30	2	1	...	...	...	...	...	...	...	...	33
		Dhan Mill Kumbharwada ...		...	...	...	...	5	2	...	...	...	...	...	...	...	...	...	7
		Dhobiwada Road		...	...	...	...	2	1	1	...	...	...	...	...	...	...	...	4
		Elphinstone Road		...	...	...	...	3	2	...	...	...	...	...	...	...	...	...	5
		Fergusson Road		...	...	...	...	5	...	...	1	...	...	...	...	...	...	...	6
		Haines Road		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
		New Parbhadevi Road ...		...	1	...	...	2	...	...	...	...	...	...	...	...	...	...	3
		New Pada		...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
		Old Parbhadevi Road		...	...	...	...	12	...	...	...	...	1	...	...	...	...	...	13
		Portuguese Church Road ...		...	...	...	...	5	...	...	...	...	1	...	...	...	...	...	6
		Worli Koliwada		...	...	...	...	23	1	1	...	...	4	...	...	...	...	1	30
		Harbour, Docks, Railways and Homeless.																	
	Har-bour.	Harbour...	44,979	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
		Homeless		...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2

Report on Malaria Operations from 15th April 1912 to 31st March 1913.

No. $\frac{M}{2355}$ of 1913-1914.

MUNICIPALITY OF BOMBAY,
PUBLIC HEALTH DEPARTMENT,
No. 5A, HORNBY ROAD, FORT,
BOMBAY, *28th April* 1913.

FROM

THE SPECIAL ASSISTANT TO THE HEALTH OFFICER,
MALARIA,

To

THE MUNICIPAL COMMISSIONER,
THROUGH THE EXECUTIVE HEALTH OFFICER.

SIR,—I have the honour to submit my report on anti-malarial work done in Bombay from 15th April 1912 to 31st March 1913.

2. In accordance with the recommendations made by Dr. C. A. Bentley in his Report of April 1911 and the Executive Health Officer's proposals in connection therewith, a special Malaria Department was created in April 1912, and was placed in my charge as "Special Assistant to the Health Officer for Malaria" under your supervision and control.

3. I took over charge as Special Assistant on the 18th April 1912.

4. The following staff was appointed on the 15th April 1912 and distributed as shown below :—

A WARD.

Dr. Hirji D. Gimi, L. M. & S., B. Hy., Malaria Inspector, with nine Sub-Inspectors distributed as under :—

Section.	No. of houses as per Census Report of 1906.	No. of Sub-Inspectors.
Upper Colaba	1,197	2
Middle Colaba		
Lower Colaba		
Fort, North	1,622	5
Fort, South		
Esplanade	756	2

B WARD.

Dr. Ibrahim Khan Mahomed Vazir, L. M. & S., D. P. H., Malaria Inspector, with eight Sub-Inspectors distributed as under :—

Section.	No. of houses as per Census Report of 1906.	No. of Sub-Inspectors.
Mandvi	1,138	2
Chukla	2,053	2
Umarkhadi		1
Dongri	660	1
Market	1,260	2

C WARD.

Dr. C. Coutinho, B. Sc., L. M. & S., B. Hy., with seven Sub-Inspectors as under :—

Section.	No. of houses as per Census Report of 1906.	No. of Sub-Inspectors.
Dhobitalao	1,362	3
Fanaswadi	2,248	1
Bhuleshwar		2
Kharatalao	709	1
Kumbharwada	830	

D WARD.

There is no Malaria Inspector in D Ward, the Sanitary Inspector Mr. Ranina, supervising the work of the Malaria Sub-Inspectors, who are six in number and distributed as under :—

Section.	No. of houses as per Census Report of 1906.	No. of Sub-Inspectors.
Khetwadi	1,273	1
Girgaum	1,166	1
Chowpati	855	1
Walkeshwar	1,652	2
Mahalaxmi	1,522	1

E WARD.

Dr. K. S. Pednekar, who had worked as District Registrar No. 8 District, Malaria Inspector, with six Sub-Inspectors as shown herein :—

Section.	No. of houses as per Census Report of 1906.	No. of Sub-Inspectors.
Mazagaon	1,648	1
Tarwadi	1,170	1
Byculla	1,564	2
Kamathipura	1,178	
1st Nagpada	239	1
2nd Nagpada	523	
Tardeo	748	1

5. For the first three to four weeks the Malaria Staff was coached up in the routine work and also in the method of inspecting larvæ in wells, tanks, etc.

6. The implements for Malaria work were received from the Storekeeper on the 3rd May 1912, and each Sub-Inspector was supplied with the following complete set of articles :—

1 Ring-net with rope.
1 Zaree.
1 Hand-net.
1 Tin hand-pump.
1 Enamel cup.
1 Enamel spoon.
1 Enamel pan.
1 Bucket with rope, and
1 Ladder, in addition to empty Quinine bottles and Winchester Quarts for sending samples of larvæ and water.

7. Malaria Cards have been supplied to each Ward with different Colours as under:—

A—White.
B—Red.
C—Pink.
D—Blue.
E—Yellow.
F—Orange.
G—Green.

These cards contain the following information :—

Ward.

_____ Ward _____ Section _____ Street.

House No. _____ Name of Owner _____

Address of Owner _____

Class of occupier _____

Type of closet _____

Position of cistern _____ Larvæ present ? _____

Position of well _____ Larvæ present ? _____

Date of 1st inspection _____

Date of Notice _____

Date of 2nd inspection _____

Date of action _____

Result of action taken :—

Subsequent inspection and remarks.

Name of Inspector _____

8. The Bombay Port Trust (including the Docks), the G. I. P. and B. B. & C. I. Railways authorities, the City Improvement Trust and the Military authorities in charge of Upper Colaba, Carnac Road and Marine Lines had their own Malarial Staff to do anti-mosquito work, and they *declined Municipal supervision*. This Department however supervised these areas occasionally and whenever there was any complaint.

9. As on inspection it was found that 90 per cent. of the cisterns were *improperly* covered, it was thought desirable to induce the public to cover the cisterns by inserting the following advertisement in the local papers :—

NOTICE.

The Public are hereby informed that nearly 90 per cent. of the cisterns placed on the tops of houses for the supply of water are provided with improperly fitting lids. The result is that a large number of such cisterns breed anopheles larvæ which convey Malaria. In these cases where there are tight-fitted covers, the same are carelessly left open by servants.

Section 381 of the Municipal Act, which refers to wells, tanks, etc., is being amended, and after the same is passed by the Governor in Council, any well, tank, cistern, fountain, masonry receptacles for gardens, etc., etc., breeding larvæ of mosquitoes will render the owner or occupier liable to prosecution for creating nuisance.

It is therefore very necessary, in the interests of the house-owners and occupiers, that all cisterns should be hermetically covered and should be kept under lock and key, so as to render them mosquito-proof. The warning pipe of the cistern should also be dealt with in the same way by placing a piece of fine wire gauze against the inner opening of the pipe.

(Sd.) J. A. TURNER, M.D., D.P.H.,
Executive Health Officer.

BOMBAY, 24*th June* 1912.

10. Handbills on the same subject, 10,000 in English, 10,000 in Gujarati and 5,000 in Marathi were also printed and distributed through the Sub-Inspectors in all the houses in the City.

11. The following handbills in English, Gujarati and Marathi, giving information about the way in which Malaria fever is communicated to man through the agency of mosquitoes were also distributed by the Sub-Inspectors during their rounds :—

HINTS FOR THE PREVENTION OF MALARIAL FEVERS.

It is the duty of all persons employing labour :—

1. To improve the condition of their servants' houses and to see that they are not unduly crowded.

2. To see that their compounds and the surroundings of their houses are kept as clean as possible, special attention being paid to the clearing away of old tinpots and pans, rank vegetation, manure and refuse.

3. To fill up or drain all small pools, ponds and collections of stagnant water near their houses.

4. To see that all cisterns and tanks and wells are properly covered.

They should also be requested to use their influence among their friends, neighbours and acquaintances to the end that these may follow their example.

The Malaria Parasite is conveyed by a species of mosquito.

Precautions to be taken inside the house.

1. The proper use of the mosquito net is the best and surest prophylactic measure that we have. The net should be of a small mesh and should be tucked in carefully all round the bed. If rods are used it should be hung inside them. But mosquito nets are not available for the poorer classes who suffer most.

2. During the rains and whenever fever is prevalent, each member of your household, including your servants, should get 15 grains of Quinine a week. The money will be well spent, in that it prevents fever occurring among the members of your household and being conveyed to others by the mosquitoes.

3. The general cleanliness of your house should receive much attention. It is found that mosquitoes rest in dark and dusty corners: The cleaner the house the fewer the mosquitoes. Bins or boxes should be provided for household refuse which will be supplied by the Health Department.

4. It is advisable to have as few curtains and as little drapery in a house as possible, as they harbour mosquitoes. Curtains should be light in colour and of a washable material.

5. With regard to children, on their going to bed, it is advisable to anoint their legs, arms, foreheads and necks with oil of Eucalyptus or Menthol and Vaseline or Carbolic oil, and also when washing them, to use Turpentine soap, as such measures tend to keep off mosquitoes.

6. Careful attention should be paid to water receptacles in bath-rooms and around the house. It is not advisable to keep "gurrahs" or "chatties" full of water in a bath-room. Those in use should be emptied daily. Special attention should be paid to the "gurrahs" kept for cooling sodawater.

Precautions to be taken outside the house.

1. Small "kutcha" ponds and ditches exist in many gardens and compounds in India, and are generally the breeding places of mosquitoes, which when mature readily fly into the house. These ponds are often made by the landlord when he repairs the stables or servants' houses. Therefore, one of your first measures should be to have all ponds and ditches near your house filled up.

2. Frequently, there lie near the kitchen and outhouse old pots, kerosine tins, and other receptacles for water; a careful search for these should be made and, if found, they should be removed or destroyed.

3. The next point which should receive your attention is the surface drainage round the house. Frequently, only "kutcha" surface drains are found. When these are out of repair, stagnant water will accumulate during the rains. To obviate this, good small "pukka" surface drains should carry the water well away on every side.

4. A systematic weekly inspection of the vicinity of the kitchen, servants' houses and compound generally should be made.

5. The surface drainage round the mouth of the compound well is often very bad. Waste water accumulates there and anopheles pools are thus formed. You should therefore get a good "pukka" surface drain to carry off all waste water from the well and distribute it to the garden. The well should be protected by a close fitting cover.

6. The system of flower garden irrigation tends to form pools where mosquitoes can breed. It should not therefore be carried out close to the house, and any small tanks or reservoirs in the garden when not in use should be treated with half a tumblerful of crude Petroleum or Pesterine once a week, as this procedure stops the development of mosquitoes in them. These tanks should be covered with close fitting covers. All garden irrigation should be carried out by means of "pukka" masonry channels. All fountains should be supplied with fish.

7. Excessive vegetation and undergrowth should not be allowed to exist near the house. Anopheles mosquitoes prefer cool, dark places for resting in during the day, so that excessive vegetation should be cleared away from near the doors and windows of sleeping rooms.

8. It is important to pay attention to the cleanliness of your servants' houses and their vicinity. Native servants frequently suffer from fever, and mosquitoes haunt their dark ill-ventilated houses. The following points need attention:—

1. There is frequently a ditch or pond near the servants' house, where the mosquitoes breed. This should be searched for and filled up.
2. The houses of servants, especially menial servants, syces and grass-cutters, are frequently overcrowded. As few servants as possible should be allowed to live in the compound.
3. Servants' houses should be thoroughly cleaned out and fumigated with Sulphur once a month and whitewashed twice a year. Personal attention to the surroundings of your servants will well repay the trouble, as you will not only have healthier and happier servants, but the members of your family will run less risk of catching fever.

Malarial Fever is conveyed by Anopheles Mosquitoes after biting a person suffering from Malarial Fever.

The Mosquito lays eggs on any accumulation of water, however small, inside or outside the house, water in wells, empty flower pots, roadside pools, catch-pits, choked gutters, etc.

The Eggs look like pieces of soot on the water.

The Eggs hatch out into Larvæ in 48 hours (Fig. 1).

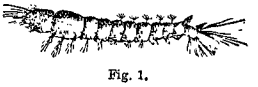


Fig. 1.

The Larvæ look like small pieces of stick lying on the water until disturbed, when they swim away backwards and sink to the bottom (Fig. 1).

The Larvæ become Pupæ (Fig. 2) in about a week.

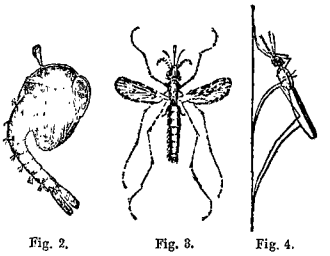


Fig. 2. Fig. 3. Fig. 4.

The Pupæ become Mosquitoes (Figs. 3 and 4) about 48 hours afterwards.

The Mosquito flies away to suck the blood of man or animal and returns to some water to lay eggs every few days, depositing several hundreds.

If the Mosquito sucks the blood of a person suffering from Malaria and bites a healthy person, the disease is conveyed, and 12 days later the healthy person may take an attack of fever.

PRECAUTIONS:—Prevent the Mosquito breeding by getting rid of accumulations of water. Prevent the access of Mosquitoes to the water, or use Pesterine or Crude Petroleum to sprinkle over the water every 7 days. Take 15 grains of Quinine weekly, and give 15 grains of Quinine weekly to your servants and children, during the Malaria season.

PUBLIC HEALTH DEPARTMENT,
BOMBAY MUNICIPALITY,
BOMBAY, 18*th June* 1912.

J. A. TURNER, M.D., D.P.H.,
Executive Health Officer.

12. The Malaria Inspectors and Sub-Inspectors were accommodated in the offices of the several District Registrars as shown herein, so that they may be in touch with all Malaria fever cases and deaths and make prompt enquiries.

Malaria Inspector A in No. 1 District Office.

Malaria Inspector B. in No. 2 District Office but as the accommodation here was very limited a room was taken in Memonwada Road in November 1912 on a monthly rental of Rs. 26.

Malaria Inspector C in No. 4 District Office.

Malaria Inspector D in D Ward Stable.

Malaria Inspector E in No. 8 District Office.

13. New furniture included tables, chairs, cupboards, &c., and were supplied to each office.

14. As soon as the new department was created all correspondence and papers in relation to Malaria work which were formerly disposed of by the Deputy Health Officers were disposed of by this office.

15. This entailed an enormous amount of work and the following clerical establishment was entertained :—

1 Head Clerk on Rs. 70.
2 Clerks on Rs. 40 each.
2 Clerks on Rs. 30 each.
1 Laboratory attendant on Rs. 25.
4 Peons : 2 on Rs. 14 and 2 on Rs. 12-8-0.

16. As the accommodation in the Head Municipal Office was very limited for clerical work and as also there was no room in the Municipal Laboratory, an office room was engaged in No. 5 A, Hornby Road, from 6th August 1912.

17. Legal action under Section 381 of the Municipal Act after the decision of the Standing Committee was taken by the Deputy Health Officers; the Inspectors and the Sub-Inspectors of this department helping in serving notices and summonses and giving evidence in the Police Courts.

18. 7 Success Sprayers made by Deming Manufacturing Co. of Salem, U. S. A., costing Rs. 60 each, were purchased and given to each of the seven Wards in the City for treating large pools, tanks, etc., with Pesterine. One intelligent cooly can easily handle this sprayer and can do a great deal of work in a short time.

19. For each and every house in A, B, C, D, E, Wards there is a card showing wells, cisterns, tanks, etc., and the variety of larvæ found, if any. Cards are also prepared for those houses where there are no potential sources of mosquito breeding. This is necessary so that during the subsequent inspections if any larvæ are found this can be entered there.

20. The procedure is for the Sub-Inspector to fill in a card for each and every house in his beat, entering therein whether any larvæ are found and of what variety. This card is then sent to this office when a letter is written to the party to hermetically cover the well or cistern, as the case may be. If this is not complied with, a reminder is sent after 15 days and if nothing further is done, the water in case of wells is sent to the Municipal analyst for Chemical Analysis and the well is then reported to the Municipal Commissioner for obtaining the sanction of the Standing Committee under Section 381 of the Municipal Act of 1888 as amended. Subsequent visits of the Sub-Inspectors are entered at the back of the card so that we can easily ascertain after how many days a particular house was visited.

21. In addition to the cards we have also a Mosquito Record Book or a Mosquito Street Register which shows at a glance the mosquito record for each and every house in the City.

22. Spot maps have been kept in each Ward and also in this office, showing the position of the wells, cisterns, etc., breeding larvæ either of culex or anopheles mosquitoes (the culex in black ink and anopheles in red ink). The different varieties of anopheles larvæ are also shown on the spot maps. Copies of Fort North and Dhobi Talao sections which contain a large number of wells are appended.

Red indicates Anopheles.
Black indicates Culex and Stegomyia.
Wells breeding Larvae.
Wells filled in.
Wells covered.
Pools, Fountains, tubs &c breeding Larvae.
Cistern breeding Larvae.
Cistern covered.
MAP
OF
FORT NORTH & SOUTH
A. WARD.
BOMBAY.
SCALE 400 FEET TO AN INCH.
LOWER COLABA
BOMBAY HARBOUR
ESPLANADE ROAD
TANK
WET BASIN
GENERAL ARSENAL
BALLARD PIER
BOMBAY MINT
APOLLO BUNDER
NAVY CLUB

MAP
OF
DHOBITALAO
C. WARD
BOMBAY.
SCALE 200 FEET TO AN INCH

Red indicates Anopheles
Black indicates Culex and Stegomyia.
○ Wells breeding Larvae.
● Wells filled in.
◎ Wells covered.
D Tools, fountains, tubs &c breeding Larvae.
□ Cisterns breeding Larvae.
▣ Cisterns covered.

23. It may be stated here that it has been decided to take action both for anopheles of all varieties and also for culex.

24 Two microscopes, two dissecting microscopes and hand lenses were ordered out from England at a cost of Rs. 990 and were received in the month of August 1912.

25. The conclusion arrived by Dr. Bentley as regards the high Malarial rate amongst the Parsee community was commented upon by some eminent members of that community. A committee of medical men was therefore appointed by the Bombay Zoroastrian Association and a report was issued by that body.

26. This report supports Dr. Bentley's conclusions in all respects as regards the spleen census of Parsee children.

27. In August 1912, two more Sub-Inspectors on Rs. 40 each were appointed, one for F and another for G Ward, as it was thought desirable to find out the conditions of wells and tanks, etc., in those Wards.

28. In all cases where religious objections were raised, the wells were personally inspected by the Municipal Commissioner with me and orders passed by him for trap doors to be kept under lock and key, where the objection was valid.

29. At the request of the Sanitary Commissioner for the Government for Bombay, two men sent by the Deputy Sanitary Commissioner, Nasik, were trained in mosquito work. At the request of the same officers Dr. D. B. Mandhle was selected by the Executive Health Officer as Malaria Inspector for Salsette, and also trained in this office. These three persons left for their duties in Salsette, to work under Major Marjoribanks, I.M.S., from 31st July 1912.

30. As several persons, including the Presidency Executive Engineer, expressed a desire that previous 24 hours' notice should be given to them whenever the Malaria staff wished to inspect wells, cisterns, etc., in their premises, post cards giving the date and time of inspection were printed and were posted 24 hours before the time of inspection.

31. Owing to the present insufficient supply of water in the lakes and want of proper facilities for pipe water in the northern part of the Island, *i.e.*, in F and G Wards, Malarial action was not pressed with reference to wells. A full trial was allowed to Khajura Fish and the result watched. Action in cases where the wells were very insanitary was however pressed.

32. As regards places of religious worship special precautions were taken. Only Hindus were sent in Hindu Temples, Parsees in Agiaries and Fire Temples, and Mahomedans in Masjids.

33. The Sub-Inspectors had strict orders not to press for inspections in such places when objected to, but to bring such cases to my notice.

34. Larvæ have been found in some wells in Hindu Temples and Agiaries where fish is being tried and the result watched.

35. There are several tanks belonging to the Hindu community, *viz.*:—

(1) Bhuleshwar Tank.

(2) Bhaghirthi Tank.

(3) Tank in Maharaj Gokulnathji's Temple.

(4) Gamdevi Temple Tank—where larvæ have been found breeding.

36. As regards the first, the Standing Committee and the Corporation have already decided under their Resolution No. 4556 of the 6th November 1912 as follows:—

"After careful consideration of the subject, in consultation with the Commissioner, the Sub-Committee are of opinion that there is no objection to the proposals mentioned below for the improvement of the Bhuleshwar Tank submitted by Mr. Korday, one of the Trustees of the tank, being approved, subject to the understanding that the works mentioned therein are carried out by the Trustees of the tanks to the satisfaction of the Commissioner before the next monsoon, failing which, the Commissioner should be authorized, if the nuisance continues, to

have the area of the tank reduced in the manner suggested by him in his letter No. 20502, dated the 5th October 1912, and that, should the nuisance be found to continue after that, the Corporation reserve to themselves the right in future of having the tank filled up :—

(1) "To fill in the tank 2 to 3 feet above the existing level.

(2) To pave the bottom with fine-dressed blue stone pavement and to finish the same in cement pointings.

(3) To renew the cement pointings of all joints of present wallings so as to make them all water-tight.

(4) To communicate the tank with the Municipal drain with a sluice valve to be operated whenever necessary.

(5) The Commissioner concurs in this recommendation."

The second tank is situated in Dadi Seth Agiari Street and is used by Bhattias for bathing by mourners after funeral ceremonies. Here there is an oil engine working daily, reducing the level of the water by 2 to 3 feet. This was done by the Trustees of the Community with a view to keep it free from larvæ but this has absolutely no effect. It has therefore been decided to cover the tank over with reinforced concrete and to provide doors of wire gauze near the steps for the bathers to get in. The question is still under consideration.

37. As regards 3 and 4 the same arrangement is intended to be brought into force after a trial with the second one.

Municipal and other Tanks.

38. The following tanks were repeatedly inspected by this department and the result shown against each:—

Mint Tank	No larvæ	were found.
Nakhoda Tank	Do.	do.
Dhobi Talao Tank	Anopheles larvæ	were found.
Cawasji Patel Tank	Do.	do.
Mustan Tank in 2nd Nagpada ...	Do.	do.
Nawab's Tank, Mazagaon	Do.	do.

39. The Corporation have only recently decided to fill in the last four tanks: the work of filling in the Dhobi Talao Tank is in progress.

40. After the termination of the monsoon the storm-water catchpits which usually breed culex larvæ were hermetically covered by the Drainage Department as usual.

Work done at Municipal Expense.

41. As many persons expressed their unwillingness to carry out Municipal requisitions on account of their poverty, the Municipal Commissioner was addressed to apply for the grant of one lakh of rupees promised by Government. The following Resolution of Government in the General Department, No. 1474 of 22nd February 1913, was subsequently issued on the following letter No. 22561, dated the 30th October 1912, from the Municipal Commissioner :—

"With reference to Government Resolution, No. 4125 of 6th July 1911, regarding the prevalence of Malaria in Bombay, I have the honour to state that the Corporation have taken action in the direction of carrying out Dr. Bentley's recommendations by employing a considerable Malaria staff, and by systematically discovering and so far as possible closing breeding places in wells, tanks, cisterns, etc., in the more thickly populated quarters of the City. In regard to wells, to which only I desire to refer in this letter, the Malaria Branch of the Health Department have taken action in respect to 858 wells. Of these 37 have been filled in and 77 hermetically covered, while in the case of 214 wells, covers with trap doors have been allowed. I may state that this is only permitted where it is shown that the well is *bona fide* required for religious purposes. Owners have been required to carry out this action at their own expense, and this has been done in the great majority of cases; in some cases, however, the parties are too poor to carry out the necessary action. There have only been some half dozen such cases so far, but this number will increase as greater pressure is put on owners to close mosquito-breeding wells. Government will remember that in paragraph 11 of their Resolution referred to, they undertook to give a grant of one lakh for the closing of wells, and I understand that out of this sum, Rs. 50,000 has been provided in the ensuing budget. This sum is considerably in excess of what will be required for some time

but I would suggest that Government should be so good as to place a sum of Rs. 10,000 out of it at my disposal, for the sole purpose of filling up or covering wells whose owners cannot do so. In view of the fact that the Corporation is bearing the expense of the rest of the Malária measures, and of the small amount at present asked for out of the sum which Government were good enough to promise, I trust that the suggestion may be approved of. I shall be glad to submit any return which Government may desire to show the utilization of the grant.

2. "I do not propose to report fully on the results of the anti-malarial action till April of next year when some experience of them will have been gained."

RESOLUTION.—The grant of Rs. 10,000 applied for by the Municipal Commissioner is sanctioned.

2. The charge should be met from the grant sanctioned by the Government of India for the anti-malarial measures in Bombay City.

3. The Municipal Commissioner should be requested to submit a statement showing how the grant has been utilized."

42. In connection with this subject the Municipal Commissioner passed the following orders:—

"In case of those desiring assistance, the Municipal Commissioner will consider their requests and will assist them with amounts varying from one-half in the case of ordinary householders to the whole in the case of the really poor. This will apply to filling in or covering with masonry or concrete, but the former should be recommended."

(*a*) In the case of the following wells, Municipal help from the Government grant has been promised and the estimates have just been received :—

19, Mount Road 479, Walkeshwar Road 89, Cavel Street 119, Girgaum Road 65, Dhanji Street 603, Girgaum Road 29, Ardeshir Dadi Street 48, 2nd Carpenter Street	Proposed to be covered over at Municipal expense.
51-53-55, Mazagon Road	Proposed to be covered over. Municipality to pay about half the cost of so doing.
116-120, Cowasji Patel Street	Offer to share expenses is to be made.
74, Bazar Gate Street	Contribution to be made by Municipality towards covering.
21-23, Pitha Street	Offer of contribution to be made.
10, 2nd Sonapur Cross Lane 11, 2nd Parseewada 48, Ardeshir Dadi Street 34, Do. do. 35-40, Khetwadi 7th Lane	Sanctioned to be covered at Municipal expense.

B.—The following Municipal wells were filled in or hermetically covered.

No.	Situation of the Well.	Municipal property.	Covered or filled in.
1	135 Cavel Street	Municipal	Filled in.
2	160,145 Cavel Street	Do.	Do.
3	70 Cavel Street	Do.	Do.
4	Opposite House No. 56, Matharpakhadi	Do.	Covered with wood leaving a trap door.
5	Gangaboodi Road	Do.	Covered with wood leaving a trap door.

C.—The following Municipal wells were treated with fish as larvæ were found therein:—

(1) Well to the west of Bombay Gymkhana—stocked with 30 dozen fish.
(2) 17 Cavel Street—stocked with 20 dozen fish.
(3) Roadside well in Cowasji Patel Street—stocked with 10 dozen fish.

43. As the fountain in the Head Municipal Office continued breeding larvæ of anopheles mosquitoes it was covered over with reinforced concrete, leaving small openings protected by wire gauze. Illustration No. 1 shows this fountain so protected.

44. As regards the coverings over wells enforced by this Department, appended herein are two illustrations (Nos. 2 and 3), one showing full wire gauze cover protected by expanded metal with a trap door under lock and key and a hand pump. The hand pump is for ordinary domestic use and the trap door is to be opened only when the water is required for religious purposes.

45. The second cover is made of concrete and cement with a trap door 1½ to 2 square feet in area made of wire gauze and kept under lock and key and to be opened only when water is actually being drawn out. This cover is more lasting than the first one, as in the former case the gauze is likely to rust and get non-mosquito-proof soon. The meshes of wire gauze enforced are 20 meshes to a running inch. As stated above, trap doors are allowed only when there are genuine religious objections. When there are no objections on religious grounds, wells are hermetically covered either by reinforced concrete, wood, or bricked or arched over. Hand pumps are freely allowed in such cases for the use of the well water.

46. Illustration No. 4 shows the model of a cistern with a mosquito-proof cover under lock and key and the warning pipe protected by wire gauze.

47. Illustrations Nos. 5, 6 and 7 show the nature of the breeding places of mosquito larvæ. Nos. 5 and 6 show the hollows in the heavy machinery of a press that was burnt down some years ago. Rain water collects in these hollows in the rainy season and these continue to act as breeding places. The owner takes no notice of our letters and we cannot take any legal action under the existing sections of the Act. The nuisance will recur in the next monsoon.

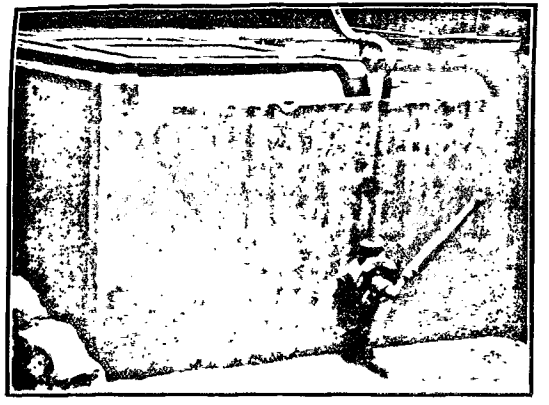
48. Illustration No. 8 shows the typical breeding places of stegomyia larvæ. These tubs full of water are kept in fuel wood depots, according to the conditions of the license, but they being kept open and unprotected, the water is found teeming with these larvæ.

49. Illustration No. 9 shows breeding places in parched rice factories, where water is stored for use.

50. Illustration No. 10 shows larvæ found in Dhobies' tubs where water is never changed for days together. This is a place in Pedder Road.

51. The following table shows the number of houses, wells, cisterns, etc., in each Ward. The number of houses given does not tally with the number given in the Census Reports where each house under a separate roof is counted as one house, whereas for our purpose we have counted all structures in one compound as one premises:—

Section.	No. of houses.	No. of wells.	No. of cisterns.
A Ward.			
Colaba	471	56	1,109
Fort, North	1,002	505	429
„ South	232	51	441
Esplanade	228	60	1,383
Total ...	1,933	672	3,362
B Ward.			
Mandvi	1,138	77	227
Chukla	903	63	107
Umarkhadi	850	41	275
Dongri	470	18	89
Market	866	306	333
Total ...	4,227	505	1,031



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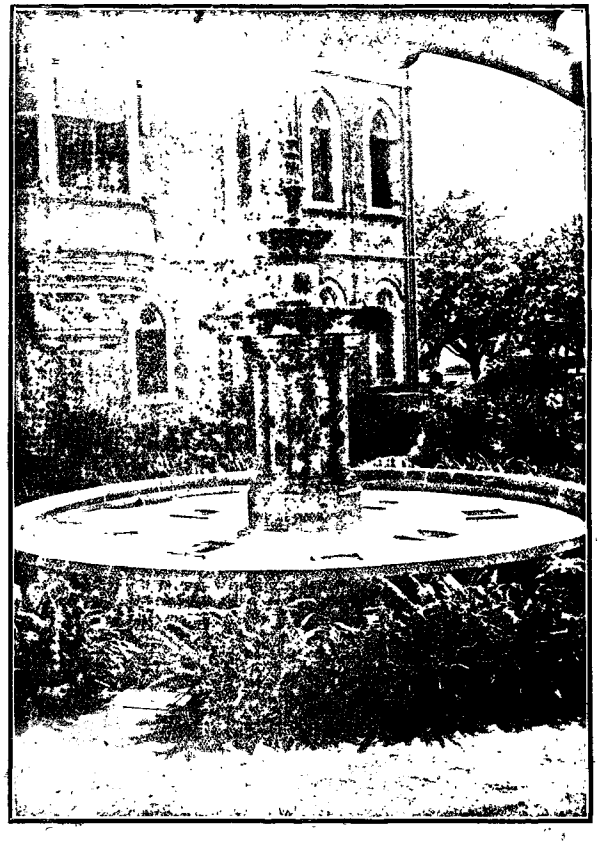

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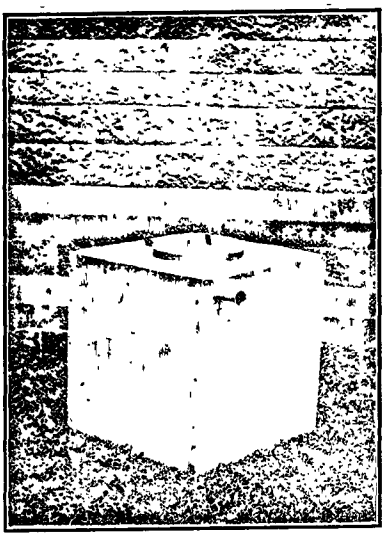

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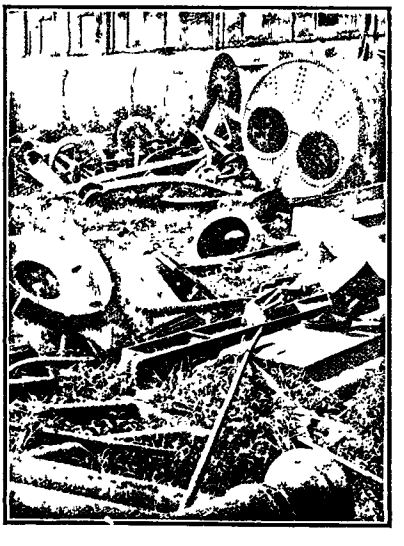

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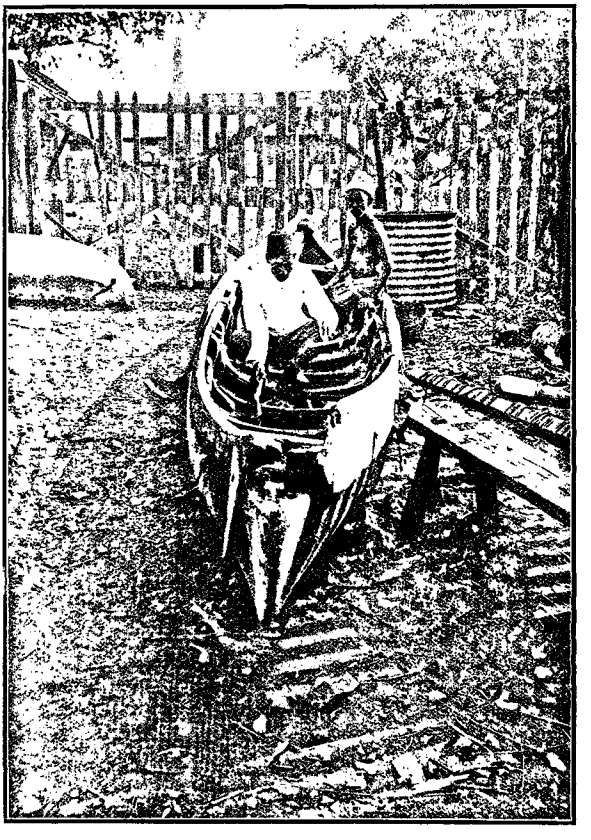

No. 7.

No. 9.

No. 8.

No. 10.

Sections.	No. of houses.	No. of wells.	No. of cisterns.
C WARD.			
Dhobi Talao	1,258	396	187
Fanaswadi	800	251	212
Bhuleshwar	1,026	169	109
Koombharwada and Kharatalao	1,390	34	20
Total ...	4,474	850	528
D—WARD.			
Khetwadi	680	215	302
Girgaum	796	332	130
Chowpaty	319	134	201
Walkeshwar	507	118	486
Mahalaxmi (except a small portion counted in E Ward)	242	87	382
Total ...	2,544	886	1,501
E WARD.			
Mazagaon	559	90	111
Tarwady	262	100	432
Byculla	719	90	111
Kamathipura	1,092	7	56
Tardeo	396	33	355
1st Nagpada	112	2	70
2nd Nagpada	549	6	1
Lower Mahalaxmi...	236	37	209
Total ...	3,925	320	1,545
Total No. of wells in A. B. C. D. E. Wards 3,233.			
F WARD.			
Parel	2,057	95	309
Sewri	1,643	112	155
Sion	3,350	325	195
Total ...	7,050	532	659
G WARD.			
Mahim	1,230	562	16
Worli	1,642	264	385
Total ...	2,872	826	401

The Legal Aspect of Mosquito Prevention.

52. The only section under which action can be taken is section 381 of the Bombay Municipal Act. Under this section action can be taken against wells, tanks, pools, low grounds, etc., and that too with the sanction of the Standing Committee. This section does not empower us to take action against open or non-mosquito-proof cisterns and other receptacles which breed larvæ. As stated in Dr. Bentley's Report no action can be taken under any section of the Act for allowing breeding places in any premises and thereby creating nuisance. The Corporation have however approved of the following amendments of Section 381 and of the provision of a nuisance clause :—

For Section 381 of the said Act the following shall be substituted :—

Filling in of pools, etc., which are a nuisance.

"381. If in the opinion of the Commissioner—

(*a*) Any pool, ditch, tank, well, pond, quarry-hole, drain, watercourse, or any collection of water ; or

(*b*) any cistern or other receptacle for water within or outside a building; or

(*c*) any land on which water accumulates and which is situate within a distance of one hundred yards from any building used as a dwelling house, is or is likely to become a nuisance, the Commissioner may, by notice in writing, require the owner thereof to fill up, cover over or drain off the same in such a manner as the Commissioner shall prescribe, or to take such order with the same for removing or abating the nuisance as the Commissioner shall prescribe."

After section 381 of the said Act the following shall be inserted:—

New section 381-A. Permission for new well, etc.

"381-A. (1) No new well, tank, pond, cistern or fountain shall be dug or constructed without the previous permission in writing of the Commissioner.

(2) If any such work is begun or completed without such permission, the Commissioner may either grant permission *ex post facto*, which permission shall not exempt the recipient from proceedings for breach of the rule contained in sub-section (1), or he may by notice require the owner of such work to fill it up or demolish it in such manner as the Commissioner shall prescribe."

Below the entry relating to section 381 the following entry shall be inserted:—

Section 381-A, sub-section (1)	Digging or constructing well, etc., without permission.	Fifty rupees.
Section 381-A, sub-section (2)	Requisition to fill in or demolish well, etc.	Fifty rupees.

Amendment of section 489.

In sub-section (2) of section 489 of the said Act below the words "section 381" the words "section 381-A, sub-section (2)", shall be inserted.

As the necessary amendment of the Act was delayed, the Municipal Commissioner was addressed in January last to write to Government for expediting the necessary requirement as nothing effective could be done without additional powers. The amendment of the Act was before the Bombay Legislative Council in March and has been referred to a Select Committee.

Water Connection Rules :—

53. Rule 36 of the new Water Connection rules states that "all cisterns shall be properly covered with a close fitting *dust-tight* lid &c." Although in many cases such lids are provided the servants tamper with the covers and generally leave the cisterns open, thus affording facilities for the breeding of mosquitoes. The Municipal Commissioner at the request of this Department, in consultation with the Hydraulic Engineer, has therefore decided to amend the rules as under and to keep a model of the cistern for the guidance of plumbers :—

Rule 36.—The word "fitted with an approved lock and key" may be inserted after dust tight lid in line 6.

Rule 40.—The word "and mosquito-proof" may be inserted after "efficient" in line 2.

The rules as amended will run as under :—

" 36. Every existing cistern, if not sound or efficient or is such as causes waste or is such as cannot be efficiently repaired, or every future cistern reservoir or storage tank shall be of the prescribed kind and shall at all times be made and at all times maintained water-tight, shall be properly covered with close fitting, dust tight lid fitted with an approved lock and key and shall be provided with a sound and suitable ballcock of the prescribed kind securely fixed to the cistern independently of the supply pipe and so set that the ball will not become submerged when the level of the water in the cistern is below the warning pipe or allow the water to rise within 2 inches of the lower side of the overflow or warning pipe. A stop-cock shall be provided on the outlet pipe of all cisterns and fixed as near the cistern as possible."

"39. Every cistern, reservoir or storage tank hereafter used or fixed in connection with water supplied by the Corporation must be accessible and placed in such position as to admit of thorough inspection and cleaning and if placed within the house or building shall have a clear space of not less than two feet between its top and any ceiling, rafter or roof. No cistern, reservoir or storage tank, except those supplying closets, latrines and urinals only, shall be fixed in any water closet, latrine or urinal or in any place in which injurious gases are likely to be produced, and as far as practicable shall not be placed immediately over any water closet, latrine or urinal."

40. " Every cistern, reservoir or storage tank, whether existing or future, shall be provided with an efficient and mosquito proof warning pipe and the materials and construction of such cistern, reservoir or storage tank shall be as hereafter prescribed."

54. In two cases we were not given facilities to inspect the wells although 24 hours' previous notice as per Section 488 of the Municipal Act was given to the owners. We were put off on trivial pretexts, although ample consideration was given when there were actual religious ceremonies being performed.

55. As no efforts were made by houseowners to hermetically cover the cisterns in accordance with our demands, the Municipal Solicitors were consulted with reference to the work being carried out departmentally and the cost being recovered from the owners ; but they advised that amendment of the Municipal Act was necessary.

Obstacles to Malaria prevention in Bombay.

56. Religious scruples have been put forward again and again in carrying out our measures, especially by Parsees and Hindus. In order not to wound the religious susceptibilities of these communities, trap doors were allowed on the distinct understanding that they should be kept under lock and key and opened only when water is actually being drawn out. This concession was freely given by the Municipal Commissioner in all cases where the objections were valid, but I am sorry to say that this was largely abused. In nearly 90 per cent. of the cases the trap-doors were left open and in those that were locked larvæ were found, indicating that they must have been left open either at night or after sunset. As our present policy is to take the people with us in the campaign the following advertisement was inserted in December last in the local papers and hand bills to the same effect were distributed.

PREVENTION OF MALARIA.

Notice.

The Public are hereby informed that the concession of a trap-door allowed on wells in native houses on religious grounds is greatly abused. The undersigned and the Malaria Department have found them quite open in numerous cases, and in some where the covers were found closed during such visits, larvæ were found breeding in the well water, thus indicating that the trap-doors must have been left open at other times. This defeats the object with which action was taken to cover the wells.

The concession is allowed on the distinct understanding that the trap-doors should be kept under lock and key and opened only when water is actually being drawn, and closed immediately after, so as to prevent the breeding of mosquitoes.

A last warning is hereby given that if hereafter any trap-door is found open, immediate steps will be taken to hermetically cover such wells, thus withdrawing the privilege of a trap-door already granted to such house owners.

Hand pumps can be had at a very small cost of which all parts are of metal, to which no religious objection can be raised, and a specimen of which can be seen in the Malaria Office —No. 5A, Hornby Road.

PUBLIC HEALTH DEPARTMENT, By Order of the Municipal Commissioner,

MUNICIPAL OFFICE, J. A. TURNER, M.D., D.P.H.,

BOMBAY, 1*st January* 1913. *Executive Health Officer.*

This also had no effect. It was therefore decided that such cases should be rigorously dealt with by withdrawing the concession of a trap-door and getting the wells hermetically covered. The Municipal Commissioner however thought it advisable that before taking such a measure a last warning should be given to the owner of such wells where trap-doors were invariably left open. For this purpose post cards in the following form were printed and sent to the owners of such wells.

Memo.—" The trap-door in the cover of your well was found open and in a non-mosquito proof condition on the instant. If this is not remedied and if the door is found open again immediate steps will be taken to hermetically cover the well without a trap-door."

57. Apart from religious objections, sentimental objections were raised by several Parsee inhabitants and I quote herein extracts from letters from two respectable Parsees.

A.—Extract from a letter addressed by Mr. Rustomji Byramji Jeejeebhai regarding well in Alice Building, Fort.

"There is a superstition connected with the well. It is well known all over this part of "the town that the well is said to be a sacred well and much sanctity is attached to it.

"Out of deference to the superstition, I had in designing Alice Building to so design it "as to leave the well alone.

"To me personally the well is of no use, but those who believe in the superstition come "and pray near the well and present offerings of flowers and cocoanuts to it.

"Under these circumstances I cannot fill up the well nor can I have it covered over by "wire hermetically."

B.—Extract from a letter from Mr. Gamanlal F. Dalal, Solicitor, on behalf of his client *re* his well in Khetwadi Main Road.

"My client has also a religious objection to the filling up of the well or to its being "hermetically closed, *viz.*, that my client and his family believe that there is a saintly being in "the said well and they always personally see the angelic form of the said being moving in the "compound at night and they always worship the said being in the well, and they have a bitter "experience of filling the said well or closing it up hermetically; because in or about the year "1902 my client did actually fill up the said well to its top but on the very night on which it "was so filled up all the members of my client's family fell dangerously ill and got a dream "that unless the said well was again reopened and kept open to the sky, they would never "recover. The very next day thereafter they had again to dig out the earth filling up the said "well and they only recovered when the said well was completely opened to the sky."

C.—A Parsee gentleman who owns a house on Falkland Road was served with a notice to hermetically cover the well. He complied with the requisition; after about a month he came to me and complained that he lost his son and that he himself was suffering from palpitation of the heart. This he attributed to the well being closed and wanted permission to get it reopened. This permission was however refused.

D.—There were many cases of this kind brought to my notice and of owners imploring me to leave their wells open. Such requests were refused, although a full trial of fish was freely allowed.

E.—There was a case in which a rich Hindu gentleman of F Ward declined to stock his well with fish, when this concession was allowed, on the plea that fish would devour the larvæ and it was against his Jain religion to do any harm to insect life. On being persuaded he at last agreed that this department should put the fish and that he would pay the cost.

58. In the case of a well in the Mahaluxmi Temple Compound, the Standing Committee passed orders to fill in the well. When the case was before the 2nd Presidency Magistrate, the Trustees of the Temple represented that the well was hermetically covered. The Magistrate, in spite of our representation that the work had not been carried out in accordance with the decision of the Standing Committee, remarked as follows :—

"The notice is to fill in the well; parties have covered it up; this will prevent effectually any nuisance to Public Health and I consider it satisfactory;" and acquitted the accused. The well was provided with a trap door which was subsequently nailed down. Immediately the next day, after the decision of the Court, the trap door was opened again. In this connection the following para from the Municipal Solicitors' letter is quoted:—

"It is thus evident that the Magistrate has in this case done precisely what he did and what the High Court decided was wrong in the case of Shivlal Motilal, that is to say, though the Act expressly makes the issue of a requisition under section 381 dependent on the opinion of the Commissioner, the Magistrate has taken upon himself to substitute his own opinion for that of the Commissioner. As thus stated the case is simple enough, and upon the plain meaning of section 381 as well as on the very clear authority of the High Court decision referred to, it certainly appears desirable to challenge the present decision." Government have agreed to lodge an appeal against the decision of the Magistrate and the appeal has been admitted by the High Court.

59. Another well-known Parsi Priest, Dastoor Dr. M. N. Dhalla, M.A., Ph. D., the High Priest of the Parsis of Karachi and Sindh, was consulted with reference to wells and his opinion is subjoined.

"In reply to your letter No. M. 16592 of the 12th ultimo, regarding the wells attached to certain Parsi Fire Temples, which on your departmental inspection have been found to contain the larvæ of mosquitoes that spread malarial fever in our midst, I have to state that the basic principle underlying all Zoroastrian tenets is the preservation of the health of the living. This makes it obligatory on the conditions of such places of worship to protect their wells from being the breeding centre of malarial fever."

"You suggest the covering of such wells with wire gauze of very fine mesh, and with the object of respecting the religious susceptibilities of Parsis, you further guarantee that the hand pump provided for drawing the water will be of iron without any rubber or leather in it. Besides this I would suggest that a small opening or a trap-door be provided. It is customary to pour consecrated water at the end of certain ceremonials into the well. This forms an essential part of the ritual, and the providing of an opening of this kind for this purpose will further add to conciliate religious sentiment."

60. In order to obviate the objections raised by religious objectionists to a hand pump which ordinarily contains leather or rubber valves, a model of hand pump in which all parts are metallic has been purchased and kept in this office for the inspection of those persons who object to ordinary pumps. Such pumps can be had in the market from Rs. 20 upward.

Education in relation to Malaria.

61. With a view to enlighten the public as to the mode in which Malaria fever is communicated to human beings, public lectures were delivered by me and Malaria Inspectors Drs. Coutinho and Gimi at the following places:—

(*a*) St. Xavier's College.

(*b*) Professor Gajjar's Laboratory, Girgaum, under the auspices of the Bombay Sanitary Association.

(*c*) Framji Cowasji Hall, under the auspices of the Bombay Zoroastrian Association.

(*d*) Prathana Samaj Hall, under the auspices of the same Association.

(*e*) Frere Fletcher High School.

(*f*) Fort and Proprietary High School.

(*g*) Esplanade High School.

(*h*) Elphinstone High School (two lectures).

(*i*) Young Men's Christian Association, Chunam Kiln Road.

(*j*) Indian Science Guild, Girgaum.

(*k*) The Bombay Medical Union.

(*l*) Wilson College, Chowpaty, under the auspices of the B. S. A., when the Rev. Dr. Mackichan presided.

(*m*) Framji Cawasji Hall, Dhobi Talao, under the auspices of the Gnyan Prasarak Mandali, when Shams-ul-Ulma, Dr. J. J. Mody presided.

(*n*) Prathana Samaj Hall, Girgaum, under the auspices of the Students Brotherhood, when the Hon'ble Justice Sir N. G. Chandavarkar presided.

(*o*) Byramji Jeejeebhoy Charitable Institution, Queen's Road.

62. Two lectures were organised by the Parsi Zoroastrian Association, one being under the Chairmanship of Dr. J. A. Turner, and at the other the Hon. Sir Jamshetji Jijibhai, the leader of the Parsi community, presided.

Sir Jamshetji exhorted the members of his community to co-operate with the Health Authorities of the City in combating Malaria which had been proved by the investigations of Dr. Bentley and subsequently by those of the Special Committee of the Parsi Zoroastrian Association to be more prevalent among Parsis than in any other community; and not to raise objections to the filling in of wells which were found to breed mosquito larvæ. Their religion prescribed the use of well water for religious ceremonies on the sole ground of purity

and the water of those wells was unfit for religious uses which had been contaminated with sewage or the breeding of mosquito larvæ; it was also dangerous to health. To oppose therefore the closing in of wells found to breed mosquitoes was as much against the spirit and teaching of religion as against the laws of health.

63. The lectures were delivered with the help of magic lantern slides, the lantern being lent by the Secretary, Bombay Sanitary Association, for the purpose. The following 65 magic lantern slides were newly prepared for demonstrations of lectures as some of the old slides lent by the Sanitary Association were not clear :—

1. Sir Patrick Manson.
2. Sir Ronald Ross.
3. Egg raft and eggs of Culex.
4. Eggs of Stegomyia.
5. Patterns formed by eggs of Anopheles.
6. Ova of Anophelines.
7. Eggs of Culex, Anophelines and Stegomyia.
8. Larvæ of Culex and Anophelines.
9. Larvæ of Anopheline-general view-hairs.
10. Pupæ of Culex and Anophelines.
11. Heads of Male and Female C and A.
12. Resting position of Culex and Anophelines.
13. Chart.
14. Chart.
15. Larvæ of A Rossii and Stephensi.
16. Larvæ of My : barbirostris.
17. Method of collecting and breeding out Mosquito.
18. Method of feeding Mosquito.
19. The proboscis (Labium and Stylets).
20. Do. shown separately.
21. Do. (Section).
22. Dissection of viscera of a Mosquito.
23. Position of salivary glands.
24. Sporozoites in Salivary glands.
25. Zygotes in stomach.
26. Dissection of head of Mosquito.
27. Evolution of the crescent parasites.
28. Net for measuring the output of Mosquito from a marsh.
29. Neuration of wing.
30. Water barrels and canoe under a house.
31. Typical breeding places of the Stegomyia.
32. Collection of odd water receptacles.
33. Mosquito proof hut.
34. Mosquito proof verandah.
35. Mosquito proof house.
36. A properly screened ward with double doors.
37. Properly screened cistern.
38. Mosquito proof cistern.
39. Cover of a well, full wire gauze and pump.
40. Cover of a well, concrete and trap door.
41. Success sprayer, pesterining a pool.
42. Mode of examining a pool for larvæ.
43. Examining for larvæ in machinery hollows.
44. Do. do. do.
45. Do. do. in a boat containing water.
46. Fountain covered with concrete and gauze covers.
47. Paper screening previous to fumigation.
48. The life cycle.
49. The Malarial Parasites-Quartan, benign tertian and subtertian.
50. Pigment in viscerae.
51. A. Rossii.
52. A. Stephensi.
53. A. barbirostris.
54. A. Jamesii.
55. A. fuliginosus.
56. A Listoni.
57. A culcifacies.
58. Enlarged spleen.

59/62. Spleen Census figures. (Four).
63. Parasites in Kala-Azar.
64. Attitudes of mf. banerofti & loa.
65. Fly larvæ in stable manure.

64. *Filariasis.*—25 Magic lantern slides were only recently prepared for educating the public and giving demonstration on the subject of filariasis, a disease which is communicated to human beings, through another variety of mosquito called Culex Fatigans. This mosquito communicates the disease exactly in the same way as Anopheles conveys malaria to man. Nyssomyzomyia Rossii also conveys this disease.

65. In order to excite some interest in the public mind with reference to Malaria, a weekly report of places where larvæ were found was sent to the press for publication free of charge and our thanks are due to the following papers for their assistance :—

The Times of India.	The Sanj Vartman.
The Bombay Gazette.	The Parsee.
The Advocate of India.	The Bombay Samachar.
The Jame Jamshed.	

66. Only important places where intelligent persons reside and who can read the particulars were selected; otherwise the list would have been too lengthy to be published.

67. The result of this publication was that we received many letters of inquiry from persons asking us to inspect their premises, &c., to point out the places where such larvæ were found. The list is still being published every week.

68. In order to draw the attention of owners and occupiers to breeding places in their compounds, small postal cards were printed and the Malaria staff were directed to hand them over to the parties concerned or to send them by post with a remark on the back mentioning the places where larvæ were found.

69. *The Mosquitoes of Bombay* :—

(*a*) *Anopheles* :—From the Census of the Anopheles mosquito larvæ examined by this Department, it has been found that the following varieties of mosquitoes are breeding in Bombay, *viz.* :—

(1) *Nyssomyzomyia rossi.*
(2) *Neocellia stephensi.*
(3) *Myzorhynchus barbirostris.*
(4) *Nyssorhynchus jamesi.*
(5) *Do. fuliginosus.*
(6) *Myzomyia listoni.*
(7) *Myzomyia culcifacies.*

The description of these mosquitoes and their larvæ is fully given in Dr. Bentley's Report and it is therefore unnecessary to dilate on this point.

(*b*) The nature of the breeding places chosen by Neocellia Stephensi which is the chief mosquito in communicating malaria to human beings is given herein :—

Wells.
Tanks.
Masonry tanks.
Cisterns.
Garden tubs.

(*c*) *Culex and Stegomyia Mosquitoes.*—With reference to Bombay Government Resolution, General Department, No. 3745 of 13th June 1912, regarding Stegomyia survey, the Director, Bombay Bacteriological Laboratory, requested us to render him assistance ; and in

accordance with this request, specimens of Culex and Stegomyia larvæ were sent to the Laboratory daily from 21st August 1912. In all 3,806 specimens were sent upto 31st March 1913.

(*d*) These varieties of larvæ breed mostly in pools, puddles, tubs, jam and sardine pots and wells. They have also been found in drain catchpits, and storm-water entrances and in antiformicas.

(*e*) In addition to specimens of larvæ of Culex and Stegomyia mosquitoes, samples of larvæ of all varieties of Anopheles were also sent to the Parel Laboratory in accordance with the request of the Director. In all 2,071 such specimens were sent up to the end of March last.

70. Samples of Anopheles larvæ collected by the Malaria staff during their rounds were daily sent to this office and examined by this department and the result tabulated. In all 4,517 specimens, including repetitions, were received. The following table shows the different varieties of mosquitoes found in different breeding places :—

Summary of Anopheles Census upto 31st March 1913.

Ward.	Variety of larvæ.	Wells.	Cisterns.	Tanks.	Fountains.	Tubs.	Pools, etc.	Odd receptacles.	Sea-shore.	Reservoirs.
A	Rossi	161	44	16	23	15	14	3	1	...
	Stephensi	376	90	14	7	19	18	7	...	...
	Jamesi	...	...	...	...	...	...	1	...	...
B	Rossi	65	70	3	17	15	12	1	...	...
	Stephensi	123	88	4	15	20	4	1	...	...
C	Rossi	397	25	30	10	11	...	...	...	...
	Stephensi	362	24	5	6	7	...	...	...	...
	Barbirostris	1	...	...	...	...	...	...	...	...
	Listoni	1	...	...	...	...	...	...	...	...
D	Rossi	439	29	48	114	41	34	5	2	4
	Stephensi	273	11	15	22	13	...	5	...	7
	Jamesi	8	...	...	...	...	...	...	...	...
	Barbirostris	38	...	3	5	...	...	...	...	...
	Listoni	6	...	...	...	...	...	...	...	...
E	Rossi	275	43	48	61	17	12	5	...	7
	Stephensi	59	9	8	8	1	...	...	...	9
	Jamesi	6	...	3	5	...	...	...	...	6
	Barbirostris	75	2	8	6	...	...	1	...	...
F	Rossi	70	1	8	12	1	...	1	1	...
	Stephensi	...	...	...	...	1	1	...	...	...
	Jamesi	11	1	2	1	...	...	...	...	...
	Barbirostris	70	4	6	5	...	...	...	...	...
	Listoni	3	...	...	1	...	...	...	...	...
G	Rossi	10	...	...	1	...	9	...	...	1
	Jamesi	2	...	...	...	...	2	...	...	...
	Barbirostris	10	...	...	...	...	...	...	...	...
	Listoni	1	...	...	...	..	1	...	...	...
	TOTAL ...	2,842	441	221	319	161	107	30	4	34

71. The following table shows by Sections the varieties of larvæ of the Anopheles and of the Culex mosquitoes found in wells in the City.

Statement showing the variety of Larvæ found in Wells.

Ward.	Section.	Anopheles.					
		Rossi.	Stephensi.	Jamesi.	Barbarostris.	Listoni.	Culex and Stegomyia.
A	Fort North	60	166	...	...	...	54
	Fort South	5	5	...	...	...	7
	Esplanade	12	16	...	1	...	9
	Colaba ...	4	5	...	...	...	8
B	Market ...	26	42	...	..	...	22
	Chukla ...	2	5	...	...	...	15
	Mandvi...	4	9	...	...	...	6
	Umarkhadi	4	4	...	...	...	5
	Dongri ...	3	1	...	...	...	2
C	Dhobitalao	99	80	...	1	..	119
	Fanaswadi	43	44	...	...	...	68
	Bhuleshwar	48	36	...	...	...	72
	Kumbharwada and Kharatalao	3	17	...	...	...	8
D	Upper Walkeshwar	9	2	...	1	...	5
	Lower Walkeshwar	13	14	...	6	...	12
	Mahaluxmi	30	17	1	10	...	6
	Chowpaty	37	27	1	2	1	20
	Girgaum	48	37	...	...	3	6
	Khetwadi	33	26	...	1	...	44
E	Mazagaon	22	15	...	5	...	10
	Tarwadi	35	10	2	25	...	18
	Byculla...	19	4	...	4	...	9
	2nd Nagpada	...	...	...	...	...	1
	Kamathipura	3	1	...	...	...	1
	Tardeo ...	5	2	...	...	...	6
	Lower Mahaluxmi	13	5	...	2	...	1
F	Parel	16	...	8	15	1	...
	Sewri ...	7	...	1	9	...	...
	Sion ...	17	...	3	25	2	...
G	Worli ...	10	...	...	6	1	...
	Mahim ...	7	...	2	3	...	1
	Total ...	637	590	18	116	8	535

Artificial means for destroying mosquito larvæ.

72. *Larvæcide.*—As before pesterine was used in destroying larvæ in pools, puddles, tanks, etc.

73. *Fish.*—As regards fish—Khajura fish, which was recommended by Dr. Bentley, was recommended for wells, fountains, &c., for destroying larvæ.

74. This trial was freely allowed in all cases where religious objections were raised, and only when this failed, further steps were taken.

75. One of the chief conditions under which the fish is successful is that no leaves, flowers and vegetation of any kind should be allowed to fall into the well water. In presence of vegetation fish is ineffective.

76. There were one or two dealers in fish who charged very exhorbitant prices and even then they did not supply in time and the quantity asked for. It was thereupon decided to invite tenders for one year for supplying to the department 400,000 of fish. The tender of one Yessoo Sakharam was accepted at the rate of annas twelve per dozen during June, July and August, and at the rate of annas ten per dozen during the remaining months of the year. The following description of Khajura fish is given from Captain Sewell's Book on Indian Fish.

"*Anabas Scandens (Kazara)*.—"It is a broad fish with a thick short head. The head is oval in shape, wider than the body and is covered with scales; the head length is nearly equal to the depth of the body, and is about one-fourth the total length. The eyes are placed far forward, their distance from the tip of the snout being only three-quarters of the eye-diameter or one-fifth of the head length."

"The dorsal fin is a long one and consists of two parts, the anterior portion is about five times the length of the posterior and is supported by seventeen or eighteen spines, while the posterior sixth has eight to ten soft rays, and is slightly higher than the spinous portion."

"The pectoral fins contain sixteen rays, and their upper margin is considerably the longer. The ventral fins are situated below and behind the pectorals and are comparatively short; the anal fin is similar to the dorsal and has nine to ten spines in front and nine to eleven soft rays behind. The caudal fin is nearly round or fanshaped and contains about fourteen rays."

"Colour: The body is rifle-green above, becoming lighter on the abdomen and during life, there are usually four wide vertical bands and a dark stripe from the angle of the mouth to the margin of the pre-operculum. The back of the head is dull red as also are the ventral fins, and the roots of the pectoral and anal fins are tinged with the same colour. There is specially in young forms, a black blotch on the side of the base of the tail, surrounded by a light, sometimes yellow ring and usually a black spot is also present on the posterior margin of the operculum."

"Owing to their possessing a double respiratory apparatus one for water breathing and the other for air, they are able to live for a considerable period out of water."

77. Experiments were made with quicklime one in 5,000 as regards its effect on larvæ. The fountain in the Head Office as well as a well in the Scotch Cemetery at 1st Marine Street, which contained larvæ of anopheles, were treated with this chemical, but without any successful result. Laboratory experiments were similarly made with Permanganate of Potash, but this too without any successful results.

Quinine.

78. Quinine takes a subordinate place in Malarial operations in this City. The District Registrars have been giving full doses of Quinine to Malarial fever patients attending their Dispensaries.

In order, however, to distribute this drug freely in those Chawls and charitable institutions, where the children showed a high spleen rate, Tabloids of Quinine Hydrochloride of gr. ii and iv were purchased from Messrs. Burroughs Welcome Co. of London at a cost of Rs. 1,200 and the supply was received in January and distributed as under: after making a second examination of those children who had originally enlarged spleen :—

No. of Tabloids issued.		When issued.	To whom issued.	Remarks re-issue.
gr. ii.	gr. iv.			
1,100	300	February, March & April.	Malaria Inspector, A Ward...	For treating the children of Halalkores and Bigaries residing in Municipal Chawls in Frere Road.
8,100	14,000	February & March.	Secretary, Sir Jamshetji Jeejibhai Parsee Benevolent Institution.	For treating the children of the Institute.
300	.....	February	The Sister in charge St. Joseph's Foundling Home.	Do.
.....	8,750	March	District Registrars No. 1 to 10.	For treating such of the patients as come under their treatment for Malaria.
300	.....	February	Secretary, American Mission School for the Blind.	For treating the children of the Institute.

79. The following letter was addressed to the Secretary, Sir J. Jeejeebhoy Parsee Benevolent Institution, with reference to the Quinine treatment and on his agreeing to this procedure a supply of Tabloids to last for three months was given :—

"With reference to the correspondence ending with this office No. 16191 of 4th November 1912, *re* The Spleen Census of children, I have the honour to inform you that this Department has examined boys and girls attending the five Schools conducted by your Institution.

"Out of 681 children examined, 298 had enlarged Spleen giving a percentage of 43·75.

In.	No. of children.	No. with enlarged Spleen.	Percentage.
Fort, North.	269	152	56·50
Dhobi Talao.	198	91	45·95
Market.	46	12	26·08

Taking the Schools separately, the figures are as follows :—

Fort School, Boys.	238	98	41·17
Fort School, Girls.	178	91	51·12
Dhobi Talao, Boys.	76	46	60·52
Dhobi Talao, Girls.	137	51	37·22
Baharkote Girls' School.	52	12	23·07

"From this it will be seen that the highest percentage is in Fort North Section and lowest in Market Section. The most infected Sections are Fort North, Dhobi Talao and Market Sections, the principal centres of Parsee population and chief localities having wells in houses breeding Anopheles larvæ.

"The next question now is how to remedy these defects. I would advise you very strongly to appoint Honorary Medical Officers for each school. These Medical Officers will periodically, either every 3 or 6 months, examine the children for spleen and advise as to the treatment.

"This Department is taking pressing action against owners of houses having wells breeding larvæ, but this procedure naturally takes a great deal of time owing to religious and sentimental objections raised by such owners.

"I would therefore advise you to treat those children who have got enlarged Spleens with Quinine regularly every day for about three months and then see its effect on the Spleen after that period. If Quinine can be given in the form of sugar Coated Tabloids under the supervision of the Head Master of the School, it must surely produce a good effect. Parents cannot be depended upon to give this treatment regularly.

"I may here state that the Executive Health Officer Dr. J. A. Turner agrees with me in these recommendations.

"In conclusion, I beg to thank you for the facility given in examining the children."

80. As the subordinate Municipal Staff and others applied for these Tabloids, half a pound of gr. iv Tabloid about 875 in number were sent to each of the District Registrars No. 1 to X for giving these to those who were actually suffering from fever and who applied for them.

81. *Esanophele.*—This department was approached by the Consul for Italy on the subject of the prevention and cure of Malaria by the administration of Esanofele Pills, which are composed of "Quinine, arsenic, iron, and some eupeptics in very happily calculated doses." These pills are said to have been found to be very efficacious in Italy for Malaria. Arrangements were therefore made to treat a number of children in schools and houses with these pills with the consent of the authorities. The Consul for Italy supplied these pills free of charge and paid the expenses of a whole time Medical Officer to examine the children before, during and after the treatment and make special investigation into the value of this drug and its effects. The experiment has only been recently commenced.

The Cost of Malaria in Bombay.

82. The monthly expenditure of the Malaria Department is about Rs. 3,800 at present; Rs. 9,000 have been spent in the purchase of microscope, furniture, implements, printing, stationery, etc. The total expenditure from the beginning of the Department up to the end of March 1913 was Rs. 49,517-9-9.

Measurement of Malaria.

83. The most valuable means of measuring the amount of Malaria in a locality is the estimation of—

I.—Spleen Index.
II.—Parasite Index.
III.—Mortality from Malaria.

I. (*a*) Spleen Index.—It has been known for many years that Malaria often produced enlargement of the spleen in those who suffered from the disease. Examining the spleen is now a routine method of measuring Malaria in a community. Such a census is taken among young children only, because observations made upon persons of different ages resident in Malarial countries show that, after a certain age, splenic enlargement becomes much less common owing probably to the occurrence of a condition of toleration or partial immunity produced by long exposure to infection. Thus the Spleen Census is the simplest and accurate method for estimating the amount of Malaria amongst a large population.

(*b*) The Spleen Census was taken by myself and the other medical officers of this department in various institutes and Municipal schools. In almost all cases the examination was conducted in a reclining posture as it was thought desirable to make very careful inspection.

(*c*) The following table shows the result of the Spleen Census by Wards :—

Ward.	No. examined.	No. with enlarged spleen.	Percentage.
A	1,167	391	33·50
B	1,377	207	15·03
C	3,951	395	9·99
D	2,253	88	3·90
E	2,289	261	11·40
F	780	26	3·33
G	60	3	5·00
Outside	149	7	4·69
Total ...	12,026	1,378	11·45

(*d*) The following table shows the result of the Spleen Census by races.

Caste.	No. examined.	No. with enlarged spleen.	Percentage.
Hindus	7,587	801	10·55
Mahomedans ...	1,268	62	4·88
Parsis	2,189	437	19·96
Christians	738	61	8·26
Jews	244	17	6·96
Total ...	12,026	1,378	11·45

There is a slight improvement in the percentage of the Parsi community, but it is still higher than that in the other communities.

(*e*) In addition to the Spleen Census the District Registrars were directed to keep a record of those patients (children under 16 years) attending their Dispensaries who had enlarged spleen and the following table gives the results of those enquiries :—

Ward.	No. of children examined.	No. with enlarged spleen.	Percentage.
A	104	56	53·84
B	1,707	193	11·30
C	1,219	239	19·60
D	1,910	125	6·54
E	372	25	6·72
F	597	47	7·87
G	683	69	10·10
Total ...	6,592	754	11·43

These figures cannot be considered as a reliable index of Malaria, as only sick persons attending the Dispensary have been examined. In order to arrive at a correct figure the spleens of healthy children in the locality must also be taken into account.

(*f*) The following table shows by races the result of Spleen Census taken by the District Registrars:—

Caste.	No. examined.	No. with enlarged spleen.	Percentage.
Hindus	4,443	425	9·56
Mahomedans	1,590	238	14·96
Parsis	219	31	14·15
Jews	125	19	15·2
Christians	215	41	19·07
Total ...	6,592	754	11·43

II. *Blood examinations.*—(*a*) Although Spleen Census gives most valuable information regarding antecedent Malaria and may be used as a measure of malarial endemicity, the microscopic examination of the blood gives information regarding the actual presence of infection and the species of parasites.

(*b*) The system of "Random Sampling" recommended by Dr. Bentley was therefore adopted for this purpose. A new copper pice was given to a child for having his or her finger pricked and this inducement was successful to such an extent that in about an hour's time I was able to take blood specimens of 100 children in a particular locality selected for the purpose. Blood films were collected in this manner from localities in different parts of the City.

(*c*) The parasite rate (of random sampling) by Wards was as follows :—

Ward.	No. examined.	No. infected.	Percentage of infection.
A	275	29	10·54
B	232	7	3·01
C	99	14	14·14
D	100	*Nil.*	0·00
E	163	13	7·97
Total ...	869	63	7·24

The higher percentage in C Ward is due to the small number of specimens examined in this Ward.

(*d*) *Parasite Index.*—In addition to this the District Registrars in the different Municipal Dispensaries were supplied with slides and the necessary requisites for taking specimens of blood of all cases treated by them for Malaria. These were examined in the Head Office and subsequently in the new office when it was opened in August last.

(*e*) Books printed with the following particulars were supplied to each of the District Registrars with carbon duplicator for entering full particulars of the patient while sending the blood specimen to this office.

Slide No._____ Case No._____ District No._____ Date_____

Name_____ Residence_____

Age_____ Sex_____ Caste_____ Occupation_____

Duration of Fever_____ Type_____ Remittent_____ Intermittent

With_____ without_____ rigors

comes daily_____ on alternate days_____

every third day_____

History of previous attacks_____

Spleen_____ not_____ enlarged_____ to percussion only_____ just felt

2 fingers — 4 fingers — Enormous

Below costal arch.

Liver_____ not_____ enlarged.

Other noteworthy signs, symptoms and complications if any_____

Has_____ not_____ taken Quinine.

Provisional diagnosis.

Remarks.

District Registrar

No. District.

Result of Blood examination.

Spl. Asstt. to Health Officer,

Malaria.

(*f*) In all 464 specimens of blood of patients suffering from Fever were sent by the District Registrars. The following table shows the results :—

Ward.	District No.	No. of specimens sent.	No. infected.	Percentage.
A	1	127	32	25·19
B	2	3	*Nil.*	37·50
	3	5	3	
C	4	107	15	15·72
	5	122	21	
D	6	28	7	25 00
E	7	4	*Nil.*	12·69
	8	59	8	
F	9	9	1	11·11
G	10	*Nil.*	*Nil.*	...
Total ...	...	464	87	18·75

These percentages must naturally be high, as the blood of patients suffering from fever was examined, whereas in random sampling we take all healthy children who are not laid up although they may have parasites in their blood.

(*g*) The parasite index of the different Wards (random samples plus specimens sent by the District Registrars) was as follows :—

Ward.	No. examined.	No. infected.	Percentage infected.
A	402	61	15·17
B	240	10	4·16
C	328	50	15·24
D	128	7	5·46
E	226	21	9·29
F	9	1	11·11
Total ...	1,333	150	11·25

The percentage in A and C Wards is higher than that of random sampling alone and this is due to the high rate of District Registrars' returns due to causes explained in sub-para. (*f*).

(*h*) Even this percentage is considerably less in A, B and C Wards than what was found by Dr. Bentley in 1910 as will be seen from the following table :—

Ward.	Dr. Bentley's returns in 1910.	Random samples alone.	Random samples plus District Registrars' specimens.
A	34·8	10·54	15·17
B	13·7	3·01	4·16
C	27·7	14·14	15·24
D	5·3	0·00	5·46
E	3·7	7·97	9·29
F and G	3·6	... ..	11·11
Total ...	23·4	7·24	11·25

The total percentages in columns 3 and 4 were also considerably less.

The higher percentage in E Ward is due to orphans from up-country malarial places coming to the Lady Northcote Hindu Orphanage, suffering from fever and enlarged spleens. The parasite rate in this Orphanage was 17·01 in October 1912.

III. *Mortality from Malaria.*—The following table shows the mortality from Malaria by Wards ;—

Ward.	1908.	1909.	1910.	1911.	1912.
A	77	72	80	81	91
B	133	71	78	112	101
C	41	45	50	52	58
D	38	20	29	23	22
E	35	51	37	39	56
F	5	11	9	9	22
G	6	6	1	10	7
Harbour	6	17	9	8	3
Total ...	341	293	293	334	360

"This slight increase in the number of deaths from Malarial Fever in 1912 does not necessarily indicate that Malaria is on the increase, but that diagnosis is more accurate and registration of the cause of death more reliable."

84. The actual practical work was commenced after September when we had settled down in the new office.

85. During this period of six months we examined 12,026 children for spleen and 1,333 specimens of blood for parasites.

86. Owing to insufficient powers given to us under Section 381 of the Municipal Act, we could take action only about wells and low grounds. There are thousands of cisterns, tanks, tubs, &c., breeding larvæ, against which no action can be taken under any of the sections of the Municipal Act. The only alternative in such cases was to write to such parties and continue writing and reminding them about it, though with very little result.

87. From the table given in para. 96, it will be seen that we had 616 wells covered without resort, to legal measures, *i.e.*, by writing and persuading the owners to carry out our requisitions.

88. This entailed an enormous amount of clerical work as will be seen from the number of letters inwarded and outwarded during this period.

89. It is too early yet to expect any practical results from the measures adopted by this department. Unless the Act is properly amended and sufficient powers are given to the executive nothing effective can be done.

90. However with what little powers we had and in spite of enormous difficulties we have filled in and covered 105 and 603 wells respectively.

91. I give the following tables in order to show the gradual reduction in Malaria since the last epidemic of 1909.

I.—*Spleen rate:*—

(*a*) In Esplanade Section Dr. Bentley found the spleen rate to be 73·38 per cent. in 1909, and 48·4 per cent in 1910; in 1912-13 however it was 27·37.

(*b*) In Fort North there was similar reduction from 49·44 per cent. in 1909 to 40·48 in 1912-13.

II.—*Fever admissions:*—

(*a*) The fall *in the percentage* of cases of fever admitted to the Frere Road Dispensary is as shown below:—

Year.	Total cases of Fever treated.	Total cases treated.	Percentage of cases of Fever.
1908 ...	7,173	11,686	61·3
1909 ...	4,240	8,158	51·9
1910 ...	4,012	7,951	50·4
1911 ...	5,908	14,828	39·84
1912 ...	5,047	13,519	37·3

The large number of fever cases treated is due to the fact that people now-a-days resort to medical treatment early owing to educative measures adopted. In former days English medicines were not very popular and hence unintelligent persons avoided dispensaries.

III.—*The Parasite Rate* :—

Wards.	Percentage 1910.	Infected. 1912.
A	34·8	15·17
B	13·7	4·16
C	27·7	15·24

IV.—The result of the Spleen and Parasite rate of the City Improvement Trust Chawl in Palton Road:—

	1909.	1912.
Spleen rate	56	36
Parasite rate	40	19·17

92. It is to be remembered in connection with Malaria measures that a large number of persons of the labouring classes come to our city daily from the surrounding infected countries. These persons are "reservoirs" and in suitable surroundings they act as the propagators of the disease through the agency of Anopheline mosquitoes.

93. I perfectly agree with the following remarks at page 31 of the Health Officer's Report for the year 1911.

"Success can only be in the distant future when the City has developed and expanded and the people are alive to the advantages of Sanitation and to the cause of Malaria. The appointment of a large establishment and the amendment of the Act and Byelaws, however necessary they may be, cannot immediately relieve the City of Malaria. In all the reports I have made, I have always maintained this."

"The work is no *sinecure* and the measures will not be popular and success cannot be immediate and we must have the good will and support of the Corporation."

94. Two visits were paid by me to the New Docks in March last. On both these occasions larvæ of Neocellia Stephensi and of Culex variety were found in some pools and the attention of the Secretary, Port Trust, was drawn to the same. The Medical Officer of the Trust is paying particular attention to these places and informs us that they are regularly attended to so that the larvæ do not arrive at maturity.

95. The following table shows the number of Notices issued under Section 381 of the Act, the number of prosecutions instituted and the amount of fine inflicted by the Presidency Magistrates :—

Ward.	No. of notices issued under section 381 of the Act.	No. of prosecutions instituted.	No. in which parties were fined.	Amounts of fines inflicted.
				Rs.
A ...	41	11	2	15 25
B ...	59	2	2	8 15
C ...	67	2	2	5 7
D ...	118	54	4	3, 5, 10, 20
E ...	36	18	1	10
F ...	5	3	*Nil*	*Nil*
G ...	2	...	*Nil*	*Nil*
	328	90	11	123

96. The following table shows the actual work done by this department during the year.

No. of wells filled in			105
Do. covered			603
	(*a*) With wire gauze	33	
	(*b*) With concrete	91	
	(*c*) With wood	71	
	(*d*) Leaving trap door	373	
	(*e*) With trap door and pump	35	
			603
Do. covered or filled in without resorting to legal measures			616
Do. covered or filled in after resorting to legal measures		92	
			708
Do. reported to the Standing Committee			250
No. of cases in which the sanction of the Standing Committee was received			214
No. of prosecutions instituted under Section 381 of the Act			90
No. of houses inspected by the Inspector including repetitions			14,090
Do. do. Sub-Inspector do.			1,94,714
Do. in which anopheles were found			5,613
	(*a*) in wells	4,944	
	(*b*) in tanks, etc.	669	
Do. in which Culex were found			3,266
	(*a*) in wells	2,652	
	(*b*) in tanks, etc.	614	

No. of letters written to hermetically cover cisterns	642
No. of cisterns hermetically covered	1,158*
No. of wells for which fish were recommended	452
Do. do. do. successful	180
No. of letters inwarded	20,043
No. of letters outwarded	27,780

97. As regards the work done by this Department, I give below a short statement showing letters addressed to different officers and the results thereof.

I.—To the Municipal Commissioner :—

(*a*) For filling in the Clerk Road basin where mosquitoes breed largely. A portion of this area is being filled in.

(*b*) To write to Government to cover all unused wells belonging to Government situated in the Maidan—under consideration.

(*c*) To hermetically cover wells, to fill in the ponds, and the artificial ravines in the Victoria Gardens as the same breed larvæ of Anopheles mosquitoes. It was decided by the Municipal Commissioner as follows :—"As the ponds must remain as a feature of the gardens it is not possible to get rid of mosquitoes. I don't think it much use to close the wells, etc., when the ponds remain. This work may be noted as desirable, but it cannot be considered urgent when the large area of ponds remains."

(*d*) Regarding the filling in of the well on the plot of ground purchased from Government for extension of the Municipal Office building, as the same breeds larvæ. Estimates have been prepared and the matter is under correspondence.

II.—To the Executive Engineer, Bombay Municipality :—

(*a*) To hermetically cover all cisterns in all buildings in charge of the Municipality. Estimates in respect of this are being prepared.

(*b*) To close up all openings over inspection chambers, manholes, etc., in the Head Municipal Office building and also to provide covers over flushing cisterns attached to all water closets. Work done.

(*c*) To cover the three masonry tanks behind the B. B. tank night-soil depôt. Work in hand.

III.—To the Hydraulic Engineer :—

(*a*) Regarding hermetically covering the filter beds in the Bhandarwada Reservoir and protecting by wire gauze every ventilator and opening in the roof of the Malabar Hill Reservoir and providing double doors to the filter beds of the same, so as to make the whole Reservoir mosquito proof. The Hydraulic Engineer estimated that the cost for Bhandarwada would be three lakhs and that for Malabar Hill Rs. 9,000. The Municipal Commissioner then decided that the Malabar Hill Reservoir should be made mosquito proof and to postpone the consideration of the question of Bhandarwada to some future date. Work in respect of the former Reservoir will shortly be taken in hand. Larvæ were found in the filter beds of both the Reservoirs.

(*b*) To prepare a model of a cistern with mosquito proof covers and warning pipe protected by wire gauze. The model has been prepared and kept in this office to show it to plumbers and architects.

(*c*) About teaching the work of larvæ detection to the two Water Works Inspectors at Malabar Hill and Bhandarwada Reservoirs. To this no objection was raised and the request was complied with.

(*d*) To put in proper order the ravine to the West of the Malabar Hill Reservoir and to prevent collection of water. This has been attended to.

IV.—To the Dy. Executive Engineer, Drainage :—

Regarding hermetically covering all cisterns over the public latrines and urinals in the City. Estimates are being prepared.

V.—To the Superintendent of Licenses :—

To enforce the provision of zinc tubs or barrels with tight fitted mosquito proof lids and a tap at the bottom instead of the present wooden casks without covers or non-mosquito proof covers for the storage of water in all livery stables and fuel wood depôts ; as the existing casks in almost all cases are breeding places for Stegomyia. Several owners of licensed livery and bullock stables were also written to accordingly. To this the Superintendent of Licenses replied as follows :—

"With reference to your No. 25818 of 7th March 1913, I have the honour to inform you that the necessary instructions have been issued to all the License Inspectors and the Municipal

* The number of cisterns covered is greater than the Number of letters addressed as there are many cisterns in each premises.

Solicitors who are now revising the license forms have been requested to amend the forms for firewood and timber licenses so as to provide that casks kept filled with water should have water tight or mosquito proof covers."

"Owing to an accidental omission of the necessary proviso from Section 394 as amended by Act No. 11 of 1911, proceedings cannot be instituted for infringement of license conditions. A reference has been made to Government and the omission will be supplied in a short time. As soon as this is done action will be taken in cases in which the casks are found without the necessary covers.

VI.—The Executive Engineer, Presidency :—

(*a*) To hermetically cover all cisterns in buildings belonging to Government, especially European General Hospital, General Post Office, Secretariat and High Court. The cisterns in Government Buildings in "B" sub-division have now been provided with mosquito proof covers and the work in respect of other buildings is awaiting sanction of Government.

(*b*) Regarding larvæ found in masonry tank in Grant House Compound, Palton Road —attended to.

(*c*) Regarding two wells in 21, Hornby Road, Police Lines, breeding larvæ—wells properly covered now.

(*d*) Regarding covers provided to wells in the following terms :—

"I have the honour to inform you that when requisitions are made upon you to hermetically cover wells in charge of Government, they are covered over with concrete and a small opening is left which is provided with a cast iron cover. The result is that this heavy cover is removed and the well left open for nearly 3 or 4 hours everyday whenever the *mali* wants water for gardening purposes. To give an example, the trap door over the well in the Scotch Cemetery is invariably left open. I would therefore request you to hermetically cover all such wells and to fix in a hand pump whenever water is required for use."

VII.—To the City Improvement Trust :—

(*a*) To devise a reclamation scheme for the foreshore on Nepean Sea Road between Petit Hall and Mr. Vachagandhy's bungalow and to Sir C. J. Readymoney and Mr. Hirji J. Readymoney to fill in and to reclaim their respective portions of the ground in this area. The Secretary, City Improvement Trust, expressed his inability to take this work in hand "as the financial return did not justify the Board in carrying out such a scheme."

Larvæ are always found on this foreshore and a drain is being laid on Nepean Sea Road at a depth of 12 ft. and the water from the ravine can be connected to the sub-soil water drain now under construction. It has been decided to watch the effect of this drain on the foreshore pools. The question of reclaiming the foreshore is still under the consideration of the Municipal Commissioner.

(*b*) To fill in the low-lying ground behind house No. 679—83, Tardeo Road—under correspondence.

(*c*) To remove tubs kept in sheds in Chinch Bunder Road and in grain godowns —under correspondence.

VIII.—To the Bombay Port Trust :—

(*a*) Regarding wells and cisterns in Colaba and Walter Roads; wells filled in and cisterns hermetically covered.

(*b*) At Jamsetji Bunder, some earthern vessels, tubs and casks for dying nets by fishermen were breeding larvæ especially in the monsoons; the tubs are attended to now.

IX.—To the B. B. & C. I. and G. T. P. Ry. Companies :—

(*a*) To hermetically cover all overhead cisterns within their limits and especially at Grant Road and Colaba Stations. The work is in progress.

(*b*) Regarding well in the Grant Road Station Yard, the cover of which is now in a non-mosquito proof condition—under action.

(*c*) To hermetically cover the well in the Railway Yard at Colaba Causeway as it breeds larvæ—under correspondence.

(*d*) Regarding hermetically covering big overhead cisterns within G. I. P. Ry. Yards behind the European General Hospital as the same breed larvæ. The work of covering all the cisterns has commenced.

(*e*) Drawing their attention to the defects observed in their respective compounds in A to E Wards as regards wells, overhead and small cisterns, low ground, masonry tanks, etc.; work in progress and under correspondence.

X.—To the Physician in charge of St. George's Hospital:—

To hermetically cover the cisterns. Anopheles and Culex mosquito larvæ were found here in a tub on 6th July 1912, and also in a masonry tank near Dhobi Ghat on 29th August 1912. On the 17th September 1912, they were found in the fountain and in four masonry tanks. No larvæ have been found now. The cisterns are all hermetically covered.

XI.—To the Officiating Commanding Royal Engineer.

(a) To hermetically cover the well, cisterns and masonry tank breeding larvæ situated at 5, Queen's Road—work done.

(b) Also to hermetically cover the cisterns at 8, Queen's Road—under correspondence.

XII.—To the Secretary, New Museum.—To hermetically cover the well and cistern; well water is used for building purposes—under correspondence.

XIII.—To the Staff Officer, R. I. M., Dock Yard.—To hermetically cover the overhead cisterns in the following terms :—

"With reference to the correspondence ending with your No. 318 of 17th December 1912, and the interview my Special Assistant had with you on the spot, I have the honour to inform you that it is very necessary that all the four overhead big cisterns should be hermetically covered. We are now taking energetic steps to close all wells and tanks in your neighbourhood and it is quite possible that, after these potential sources are closed, mosquitoes may find your tanks a suitable place to breed in. It is not a good policy to wait for larvæ to be developed in your tanks.

"If the tanks are hermetically covered it will save you the frequent trouble of examining and posterining them every week. Dr. Charles Bentley in his Report strongly recommended covering all such tanks in order to prevent the breeding of larvæ. From para. 275 of this Report, I find that larvæ of Neocellia Stephensi were found breeding in a number of open tanks in your compound in 1908 and again in a few other places afterwards.

"This is now a sufficiently strong case to carry out this important antimosquito measure."

XIV.—To the Managers of the several Bulk Oil Installation Companies.—To either cover the septic tanks for latrines with wiregauze or to treat the same with posterine twice a week. This has been complied with.

XV.—To the owner of a big quarryhole at 97, Arthur Road—formerly belonging to Government and now leased to the present owner; being gradually filled in.

XVI.—To the owner of the Sunderdas Mill.—To fill in the tanks—under action now.

XVII.—To the Manager, Bomanji Petit Mill, Clerk Road.—Regarding well and tank where larvæ have been found—under correspondence.

XVIII.—To the Officer Commanding the Marine Detail Lines, Carnac Road,—regarding the covering of two wells and cisterns. Larvæ were also found in 20 old privy receptacles—three buckets and two wooden tubs. One well filled in and the other well covered with a trap-door; under correspondence; cisterns have been hermetically covered.

XIX.—To the Manager of the Scotch Cemetry, Marine Lines.—To hermetically cover the well—work done.

XX.—To the Colaba Land and Mill Co., Ltd., regarding hermetically covering four wells—under correspondence—covers non-mosquito proof.

XXI.—To the Agent, Colaba Land and Mill Co., Ltd.—to hermetically cover two open wells in 1st Pasta Lane which breed larvæ; wells covered and made mosquito proof.

XXII.—To the Secretary, Colaba Press Nos. 45 to 50.—To cover masonry tank and cistern—improperly covered—under correspondence.

XXIII.—To the Secretary, Fort Press—To cover masonry tanks and cisterns—nothing done.

XXIV.—To Mr. Ahmedbhoy Habibhoy, regarding premises Nos. 51-52, Thomas Street, Old Apollo Press, to hermetically cover the well and to remove old machinery in which larvæ breed during the monsoon. Nothing done to the machinery (*vide* photo under para. 47). Well covered but is now non-mosquito proof and under correspondence.

XXV.—To the Secretary, Gaculdas Kalianji Press, Victoria Bunder—to hermetically cover the underground tank and cistern—work in progress and under correspondence.

XXVI.—To the Manager, Sagar Press.—To hermetically cover cisterns—cisterns now empty and under correspondence.

XXVII.—To the Manager, Government Central Press—To hermetically cover the cistern—work done.

XXVIII.—To the Manager, Bombay Cotton Press Nos. 2 and 2-A.—To hermetically cover well and cisterns—well filled in, 2 cisterns removed and one big cistern under corres-

XXIX.—To the Manager, Taj Mahal Hotel, regarding hermetically covering the cisterns and filling in the masonry tanks—all 78 cisterns hermetically covered and three masonry tanks filled in.

XXX.—To the Owner of Green Mansions. To hermetically cover the cisterns. Two are still non-mosquito proof and under correspondence.

XXXI.—To the Manager, Apollo Pyrke's Hotel, to hermetically cover the cisterns—some are still non-mosquito proof and under correspondence.

XXXII.—To the Secretary, Yacht Club, regarding hermetically covering the well and cisterns—the work has been done.

98. To recapitulate, the measures adopted were—

1. Closing of wells and cisterns breeding larvæ.
2. Treatment of all temporary pools and puddles with pesterine.
3. Giving a trial to fish before resorting to legal measures.
4. Distribution of Quinine.
5. Taking steps to fill in hollows, big tanks, and low grounds with a view to remove all potential sources of mosquito breeding.
6. Educating the public and school children by means of lectures with magic lantern slides and also by the distribution of hand bills.
7. Taking legal action where parties failed to comply with our demand.
8. Taking spleen census of children in schools and houses and also of patients attending the Municipal Dispensaries.
9. Examining specimens of blood of children in different parts of the City and also of patients suffering from fever attending the ten Municipal Dispensaries.
10. Examining the different species of Anopheles and classifying them.

99. The following shows in a tabular form the actual work done during the year:—

No. of wells filled in	105		
No. of wells covered without trap doors	195	708	
No. of wells covered with trap doors	408		
Out of these the No. covered without resorting to legal measures.	616		
No. of cisterns hermetically covered	1,158		
No. of letters inwarded	20,043		
No. of letters outwarded	27,780		
No. of lectures delivered	15		
No. of children examined for spleen	12,026		
No. of blood slides examined	1,333		
No. of specimens of larvæ of Anopheles inspected and classified	3,517		
		G. ii and Gr. iv.	
No. of tabloids of Quinine distributed	9,400		23,250

100. I am glad to report that both the outdoor and the indoor staff worked satisfactorily during the year.

101. In conclusion, I must express my best thanks to the Executive Health Officer for his valuable advice and help given to me, from time to time, in the discharge of these onerous and responsible duties.

I have the honour to be,
Sir,
Your most obedient servant,

K. B. SHROFF,
L. M. & S. D.P.H., D.T.M. (LIVERPOOL),
Special Assistant to the Health Officer, Malaria.

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on 01 February, 2020